An Investigation into Teaching Strategies For Chinese Traditional Music In Hong Kong Secondary Schools

By

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ABSTRACT

Chinese music has always been in the school music syllabuses of Hong Kong but it did not have a firm place until the change of the political status in 1997. The return of sovereignty to China brought about a new stress on Chinese culture for Hong Kong generally and for schools in particular. There is now a strong emphasis on Chinese music, especially traditional Chinese music. However, the emphasis on Chinese music may have caused an overloaded curriculum, as teachers have to cover both Chinese and Western music. It is possible that teachers emphasize factual knowledge about Chinese music, because information about Chinese music can be transmitted by means of technological devices such as CD_ROM, audio and audio-visual teaching materials, PowerPoint and the internet. The use of such aids can alleviate the problems of overload, as teachers can cover most aspects of the teaching topics listed in the music syllabuses.

However, it has been argued that the goals of music education should include the acquisition of a personal experience of music, rather than focusing exclusively on acquiring knowledge about music. Reid (1986) claimed that the kind of personal experience-knowledge of arts could not be derived merely from 'know-that' and 'know-how', which he called propositional knowledge. He said that an 'acquaintance knowledge of music', which results from direct contact or acquaintance with music, is crucial to the understanding of music. This kind of musical knowledge is an accumulation of knowledge-experience, a kind of personal knowledge of music over and above factual knowledge about music.

Reid (1986) suggested that personal knowledge of music should be acquired by means of "renewed and fresh cognitive occurrences and repeated cognitive experiences". However, there has been little agreement on ways to acquire the acquaintance knowledge of music. Therefore this study initially focuses on teaching strategies that might help students acquire personal knowledge of music. What teaching strategies can help

students to acquire a personal appreciation and experience of music? To what extent is it possible to formulate teaching strategies to bring about a personal knowledge of traditional Chinese music in Hong Kong schools?

From a literature review of Chinese music teaching I identified four observational teaching variables, which appeared to influence the acquisition of personal knowledge. The variables were (a) teaching sequence, (b) the relative proportion of teaching time devoted to giving information and to providing musical experience, (c) students' control over music activities or 'framing' and (d) repeated rather than one-off listening. I investigated each variable separately in a secondary school context. A pilot test was followed by experiments to isolate and investigate the four main variables.

In the case of the first variable, there were two treatments: (a) a teaching sequence that placed information first and (b) a teaching sequence that placed information last; In the case of the second variable, there were also two treatments: (a) a high proportion of information-giving relative to musical involvement and (b) a low proportion of information-giving relative to musical involvement (a) In the case of the third variable, the two treatments were: (a) strong didactic instructional framing and (b) weak didactic instructional framing. In the case of the fourth variable, the responses of the same group of students were taken after their first listening to a series of traditional pieces of Luogudianzi in Beijing opera and after subsequent listening to the same music,.

Data on students' personal knowledge of Luogudianzi in Beijing opera were collected in two ways. The first quantitatively evaluated students' changes on (a) level of musical understanding of, (b) attitude towards the Luogudianzi in Beijing opera after the teaching of a series of lessons called "Chinese non-melodic percussion instruments and Beijing opera Luogudianzi". Students completed an attitude inventory and a written response on the test music of Luogudianzi after the teaching of the lessons. Their musical understanding of and attitudes towards the test music of Luogudianzi under Treatment 1 were then compared with their musical

understanding of and attitudes towards the test music after Treatment 2. I also collected qualitative data on students' attitude towards and musical understanding of the Luogudianzi in semi-structured student interviews, and also interviewed the teacher at the end of a series of lessons.

Each teaching variable was tested separately in every experiment. The findings showed that not every teaching variable affected students' personal knowledge of Luogudianzi. Only the teaching variable which emphasized more information and less direct musical experience in listening had an effect on students' attitudes to and musical understanding of the Luogudianzi. Factors which might have contributed to the unexpected results were identified.

The study raised as many questions as it answered and authentic musical experience in teaching traditional music remains an issue which deserves further investigation in formulating teaching strategies to bring about a personal knowledge of Chinese music.

I hereby declare that the work presented in this thesis is entirely my own.

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INTRODUCTION

The Problem

This study began with a specific problem – concern about strategies used to teach Chinese music in Hong Kong secondary schools.

Chinese music has always been in the school music syllabuses of Hong Kong but it did not have a firm place until the change of sovereignty, which made Hong Kong part of China in 1997. However, since 1997 music teachers have had to teach more Chinese music. The new emphasis on Chinese music has caused an overloaded curriculum, as teachers have to cover many topics on Chinese and Western music listed in the music syllabus. With the help of information and technology devices such as CD_ROM, audio and audio-visual teaching materials, PowerPoint and internet, teachers can cover most of the topics. However, teachers tend to focus on the facts about music rather than a 'personal understanding' of music in teaching.

Reid (1986, p. 215) asserted that the acquisition of propositional knowledge of music can not assure a personal understanding of music. It is the acquaintance knowledge of music that enables people to have thorough and personal understanding of music. The goals of music education should include the acquisition of a personal experience of music, rather than focusing exclusively on acquiring factual, propositional knowledge about music (Metcalfe, 1987; Paynter, 1970, 1982; Swanwick, 1992).

The critical issue addressed by this thesis is that there is no agreement on ways of achieving a personal understanding of music, particularly traditional Chinese music taught in Hong Kong.

Background to the Problem

Aspects of Chinese traditional music existed in secondary school music syllabuses prior to 1997 (Authority, 2004; Committee, 1987; Council, 1992; Council, 1993; Curriculum Development Council, 1983). For example, there were basic rudiments of Chinese music such as the modality

of Chinese music, introduction of Chinese folksongs, regional Chinese operas and instrumental music. Chinese musical instruments and well known instrumental pieces were suggested in the 1983 Music syllabus of Form I-III (Curriculum Development Council, 1983) and topics of Chinese music were common in music textbooks. However, there was no obligation for teachers to teach Chinese music or music in the Chinese tradition in schools.

The return of Hong Kong sovereignty to China raised issues such as 1) the imbalance between Chinese and Western music in schools and higher education institutions (Lam, 1999; C. C. Leung, 1999; Leung, 2002; Li, 1999; Wong-Yuen, 2000; Yeh, 1998), 2) the rationale for teaching Chinese music in Hong Kong (C. C. Leung, 1999; Leung, 2002; Yu-Wu, 2000), 3) difficulties that music teachers had in teaching Chinese music (Cham-Lai, 1999; Curriculum Development Institute, 1998; Leung, 2002), and 4) approaches used to teach Chinese traditional music (Leung, 2004; Ng, 2003; Wong-Yuen, 2003; Xiaozu, 1998).

After 1997 Chinese music teaching materials were developed and produced. These included (1) materials on Chinese music and music appreciation jointly published by the Music Section, Advisory Inspectorate of the Education Department, the Hong Kong Institute of Education and Radio 4, Radio Television Hong Kong (Huaxia Yueyuen Pianji Waiyuenhui [Chinese Music Editorial Board](Ed.) 1998), (2) a set of 4 CD-ROMs on Chinese Music Instruments funded by the University Grants Committee and produced by The School Interface Project of the Hong Kong Institute of Education in 1999, and (3) a CD_ROM of Cantonese Opera and Chinese Stringed Instruments produced by The Music Inspectorate of the Education Department. These materials proved useful and relevant because they addressed the needs of teachers and helped them in preparing and teaching Chinese music lessons.

Despite these efforts, the teaching of Chinese music, especially traditional Chinese music, was not very well received by students (Cham-Lai, 1999; Fung, 1999/2000; Leung, 2002). They thought this music

was very old fashioned. They were more interested in Canto-pop (Fung, 1999/2000). There was a gap between official intention and student interest in the teaching of Chinese music in schools.

It is clear that successful teaching of Chinese traditional music in Hong Kong is likely to depend on teachers finding ways to help their students engage with Chinese traditional music. Studies have shown that students' preference in music can be changed if suitable teaching strategies are employed (North, 1997; Shehan, 1984; Shehan, 1985 fall). The identification of teaching strategies to bring about positive attitudes and significant knowledge of traditional Chinese music was central in this study.

Aim of the study

This study aimed to find ways of helping secondary school students in Hong Kong to develop a personal understanding of Chinese traditional music. It aimed to identify effective teaching strategies that would help students to have a personal understanding of the music and change their attitude towards Chinese traditional music. The main research question is as follows:

> *"To what extent do the four variables (a) teaching sequence, (b) the proportion of teaching time devoted to giving information and providing musical experience, (c) students' control over music activities or 'framing', and (d) repeated rather than one-off listening, identified from the literature on teaching Chinese music, lead students to develop a personal knowledge of the part of Chinese traditional music called Luogudianzi"*

The central hypothesis of this study is that students' personal knowledge of music depends on the emphasis given to four variables, namely, (a) teaching sequence, (b) proportions of teaching time devoted to giving information and providing musical experience, (c) students' control over music activities or 'framing', and (d) repeated rather than one-off listening. In the review of the literature on teaching Chinese music, reported

in Chapter Two, these four variables were identified as the key factors likely to affect personal knowledge of music.

Methodology

This study was an experimental study. A pilot study was followed by experiments to isolate and investigate the effect on students' musical understanding of and attitude towards the Luogudianzi of four main teaching variables namely (a) teaching sequence, (b) proportions of teaching time devoted to giving information and providing musical experience, (c) students' control over music activities or 'framing', and (d) repeated rather than one-off listening. Each experiment was conducted in a different secondary school. A total of 695 students participated in the study.

For the testing of the first three variables: (a) teaching sequence, (b) proportions of teaching time devoted to giving information and providing musical experience, (c) students' control over music activities or 'framing', four classes were involved. Two matched classes were used for each treatment. However, as explained in Chapter 3: Research Design and Methodology, for the testing of the fourth variable, (d) repeated rather than one-off listening, there was one treatment group with five classes

A series of lessons called "Chinese non-melodic percussion instruments and Beijing opera Luogudianzi" were taught in the experiment to examine the effect of the teaching variables: (a) teaching sequence, (b) proportions of teaching time devoted to giving information and providing musical experience, (c) students' control over music activities or 'framing', but not in the teaching variable (d) repeated rather than one-off listening The teaching content of this study included Chinese non-melodic percussion instruments, aspects of Luogudianzi and the musical features of the Luogudianzi.

Data on students' musical understanding of and attitude towards the Luogudianzi were collected in two ways. First students were asked to complete a questionnaire employing attitude inventories and written responses after the teaching of the series of lesson. Second, semi-structured

student interviews and teacher interviews were conducted after the teaching of the lesson. Data collected from the questionnaire and interviews were triangulated.

Structure of the thesis

This thesis has five chapters. This first chapter has introduced the study and explained its purpose and main research question. It has also provided background information on music in Hong Kong and Hong Kong schools. The teaching of Chinese music in Hong Kong secondary schools has been highlighted with special attention given to the implications of the cultural context of Hong Kong for Chinese music in the community and the music curriculum since 1997.

Chapter 2 provides the theoretical framework of the thesis. It examines concepts of musical knowledge underlying the music curriculum of Hong Kong. The chapter also examines strategies for teaching music and identifies in the literature four main teaching variables that were likely to bring about a personal knowledge of music.

Chapter 3 details the research design and methodology of the study. This chapter presents the experimental design of the four experiments, and an account of data collection and analysis. It includes the teaching content, materials and the teaching procedures of the four experiments. The chapter concludes with a report of the pilot test and a discussion of the lessons learnt.

Chapter 4 reports the findings of the four experiments.

Chapter 5 discusses each experiment in an effort to explain factors affecting the unexpected findings, and rounds off the study with a discussion of the conclusions and implications that can be drawn from the study.

Chapter 1

Background:

Music in the Hong Kong Community and Schools

Introduction

This chapter is divided into two parts. In order to provide a context for this study, the first part examines music in the Hong Kong community and the second examines music in schools, with particular attention to the impact of the return of Hong Kong to the sovereignty of China in 1997.

1.1 Music in the Hong Kong Community

For a long time students and adults in Hong Kong have been affected by both Western and Chinese culture, and both Western and Chinese music are widely appreciated. However, Hong Kong people's exposure to Western music has been broader and much more comprehensive, since Western music has been taught in Hong Kong since 1841. The following sections, starting with Western music, and then followed by Chinese music and popular music, give an account of the versatility of music of Hong Kong.

1.1.1 Western music

Western musical traditions are strong in Hong Kong. Western classical music attracts a large audience. Symphonic music receives the highest percentage of concert attendance (51.5%), followed by vocal music (5.3%), music for strings (4.3%), keyboard music (2.6 %) and other instrumental music (1.1%), according to the 1997-1998 yearly report (Chow, 1999, p.65).

Artists from all over the world regularly perform various kinds of Western music. For example, the 2004 Hong Kong Arts Festival, which included both Western and Chinese music, offered a wide spectrum of Western music, including symphonies, chamber music, piano recitals, operas, vocal recitals, choral concerts, jazz, and world music. Various styles of instrumental

music were featured, including symphonies performed by two local professional orchestras and conducted by world-famous conductors; overseas orchestras (the London Symphony Orchestra and the Prague Chamber Orchestra), piano recitals, quartets, a cello recital and a jazz and world music programme (http://www.hk.artsfestival.org/index.php/ eng/prog.).

A number of other international music festivals, organized and sponsored by The Leisure and Cultural Services Department of Hong Kong and other charitable organizations, have taken place in Hong Kong. These include "Le French May" of the French Arts Festival since 1994, and the "International Children's Choral Festival" in 1982 (Chow, 1999, p.67)

The Orchestras

There are two professional symphony orchestras in Hong Kong, both sponsored by the Hong Kong government. They are the Hong Kong Philharmonic Orchestra and The Hong Kong Sinfonietta, which perform regularly at various venues in Hong Kong. There are also a number of amateur orchestras, which have been performing since the 1960s (Chow, 1999, p.77-90).

The Hong Kong Philharmonic with about ninety musicians gave its first performance in 1895 and turned professional in 1974. It has performed a wide variety of music. The orchestra has also carried out a series of educational visits to schools, bringing classical music to 50,000 students, and given more than 140 live performances for about 180,000 people in its most recent season in 2003-04 (http://www.hkpo.com)

The Hong Kong Sinfonietta was established in 1990 and turned professional in 1999. It gives regular concerts and has also arranged and organized a series of educational concerts for students of different age groups (http://www.hksinfonietta.org/content.html).

Choral Music

Choral performances are common in Hong Kong. A large number of local amateur choirs give regular performances. Choral music flourished particularly in the 1970s, and choral music from both Western and Chinese traditions is performed at concerts. Choral festivals are common (Chow, 1999, p.95).

1.1.2 Chinese music

In general, the term Chinese music refers to music inherited from the Han Chinese, who constitute 94% of the total population in China. Owing to the long historical development and broad regional diversity of China, people in different provinces carry distinct cultural differences. They speak in different dialects and retain various music traditions. Chinese music therefore embodies a vast scope of style and abundant quantity. For example, people in the North, favour the lively traditions of Beijing opera and wind-and-percussion music, while people in the South value the more refined literary traditions of *Kunqu* opera and silk-and-bamboo music (Thrasher, 2001). It was in the 1950s that musicologists classified Chinese music into four categories, known as: folk-song, opera, narrative singing, and instrumental music (Jones, 1985).

According to Nie (2000), Chinese music also includes both traditional and contemporary Chinese music. Jones (1985), in a study of folk traditions of instrumental music of China, demonstrated that traditional Chinese music also includes music of the former imperial times and the music of folk traditions. Contemporary Chinese, the music stressed by the People's Republic of China, is played on Chinese and/or Western instruments, performed by professionals trained in conservatories since the 1930s. Tsui (1990) states that Contemporary Chinese music, which has flourished in mainland China since the 1930s, is characterised by the classical and romantic styles of Western music. It has also influenced regions nearby such as Taiwan and Singapore, which have a majority of Chinese people.

In Hong Kong, it is possible to find various kinds of Chinese music, both contemporary and traditional. Chinese music can be heard in the soundtracks of movies, in Canto-pop (popular music sung in Cantonese), TV programmes or concert halls. Performances of Chinese music, both instrumental and vocal, are frequent. These are financed either by the Hong Kong Government or by community organizations, or, alternatively, by private bodies. Interest in Chinese music in Hong Kong has increased since Hong Kong's return to the People's Republic of China in 1997. However, music which contains ancient Chinese music elements, for examples, the ceremonial music of the Xi'an area, and music of other Chinese folk traditions, is not common in Hong Kong. Contemporary Chinese music seems has overshadowed other Chinese music traditions, such as opera, narrative singing, folk-songs, song-and-dance and traditional instrumental music .

According to Yu (1999), in the 20th century the term 'Chinese music' as used in Hong Kong tended to refer only to Chinese music employing Western compositional devices, instrumentation and forms.

In view of such, a comprehensive picture of Chinese music, especially I believe that traditional Chinese music, including the opera, narrative singing, folk-songs, song-and-dance and traditional instrumental music should be promoted so as to provide Hong Kong people, especially young people, with a wider experience of Chinese music.

Though Chinese contemporary music is common in Hong Kong, it is obvious that traditional Chinese music and various styles of Chinese music have been promoted in order to cultivate an interest in Chinese culture in Hong Kong since 1997.

The following sections cover Chinese music in the community, including traditional Chinese vocal music, and the Chinese Orchestra.

Traditional Chinese vocal music

Traditional Chinese vocal music consists of two major categories: operatic music (*Xiqu* 戲曲) and narrative music (*Quyi*曲藝). Chinese narrative music is regional vocal music characterized by a strong story-telling element. In 1949, the term *Quyi* (曲藝) was used in China to describe various kinds of Chinese narrative music (Yu, 1996).

The "Chinese Operatic Art Series", presented by the Leisure and Cultural Services Department from July 6 to August 3, 2002, offered typical examples of both types of music, featuring operatic music (*Xiqu*) from different regions of China and traditional narrative music (*Quyi*) performed by distinguished national artists from the Mainland and Hong Kong. Programmes in the 'Chinese Operatic Art Series' included "*Daishui Nanyin*" (Cantonese narrative music) by artists from Canton, the "Shanghai Comic Troupe", famous for its entertaining talk shows reflecting people's everyday life, "A Showcase of Mastery Skills in Chinese Opera" by top class national performers of *Kun* (*Kunju* 崑劇), *Beijing* (*Jingju* 京劇), *Pu* (*Puju* 蒲劇), *Jin* (*Jinju* 晉劇), *Yu* (*Yuju* 豫劇), *Longjiang* (*Longjiangju* 龍江劇) and *Ji* (*Jiju* 吉劇) opera, the "Operatic Music Ensemble of Jinan City in Shangdong Province", and a performance by the Liyuan Experimental Opera from the province of Fujin.

Cantonese opera

In Hong Kong, Cantonese opera is the most popular form of opera in the Chinese operatic tradition, as the majority of the Hong Kong population is Cantonese. More than 98% of the Hong Kong people speak Cantonese (Census and Statistics Department, 1996). However, other styles of Chinese opera are also performed, such as *Chaozhou* opera (*Chaozhouju*潮州劇), *Kun* opera

(*Kunju*) and *Beijing* opera (*Jingju*) (Yu, 1999). Cantonese operas are often performed at religious festivals in Hong Kong. They can also be enjoyed in government auditoriums and commercial theatres. Sometimes, more than two shows are put on each night (Yu, 1999).

In recent years, Cantonese opera has attracted the special attention of the Hong Kong government and other funding organizations. Grants have been approved to help promote and support the performance of Cantonese Opera and Cantonese singing, and also Cantonese Opera research and Cantonese opera training programmes and exchange programmes (Council, 2000). Cantonese opera has become a hallmark of Hong Kong's traditional music.

However, the Hong Kong Government does not fund any full-time professional Chinese operatic troupes. In spite of this, there is no lack of active private Cantonese opera groups: for example, *Shiyan Yuejiuhtwan* (Cantonese Experimental Opera Troupe 實驗粵劇團), the *Hanfeng Yuejiuhtwan* (Cantonese Opera Troupe漢風粵劇團) and *Yuejiuhzijia* (The Home of Cantonese Opera 粵劇之家). Occasionally, sponsorship is granted for their performances, for instance at the Arts Festivals of Hong Kong in 1994, 1995, 1996 and 1998 (Yu, 1999).

The Chinese orchestra

The Hong Kong Chinese Orchestra is the only professional orchestra in Hong Kong specializing in the performance of Chinese music, mostly contemporary Chinese music. Established in 1977 and sponsored by the Leisure and Cultural Services Department, it is made up of eighty-five full-time professional Chinese instrumentalists (Yu, 1999, P.292). It performs arranged traditional Chinese music, regional folk music and contemporary Chinese music regularly for local audiences. The orchestra has adopted the seating arrangements of a Western symphony orchestra, with instruments arranged according to whether they are high, medium or low in pitch. Moreover, during a performance, the musicians follow the conductor and play from a score (Yu,

1999, P.292). However, the Chinese Orchestra does not follow the practices of having the *Gu* (Chinese drum 鼓) player as the conductor and allowing free improvisation by the musicians during performances of traditional Chinese instrumental (Yu, 1999, p.292).

Besides the professional Chinese orchestra, amateur Chinese orchestral groups and ensembles have been set up by various societies in Hong Kong since the nineteen sixties. Some of these are no longer performing, however. In the nineteen nineties, other Chinese orchestral groups also appeared --- those formed by primary and secondary schools. Some of the community orchestras and ensembles gave public performances locally, and even overseas in places such as Singapore, Taiwan, and Vancouver (Chow, 199, p.94-95).

Between the nineteen sixties and nineties, there were also a number of influential Chinese instrumentalists. They played the *guqin* (similar to a zither 古琴), the *pipa* (琵\u29750 琶), the *zheng* (Chinese zither with 21 or 25 strings 箏), the *erhu* (a two-stringed fiddle 二胡), the *yangqin* (dulcimer 揚琴), the *dizi* (bamboo flute 笛子), and the *xiao* (another type of bamboo flute 簫,) and the *sheng* (a reed pipe 笙), and also gave private tuition. They contributed significantly to the promotion of Chinese music in Hong Kong (Yu, 1999, p.279-284).

The Music Office, a government organization, was established in 1977 to provide training in instrumental music for Hong Kong students under the age of twenty-one. Classes in a wide range of Western and Chinese instruments are offered. The Music Office also forms Western and Chinese orchestras. Students of the Music Office have many opportunities to perform locally or even overseas. Many good players of Chinese instruments have been trained under the instrumental scheme (Yu, 1999, p.308-309). However, critics see an imbalance between the training provided for instrumental music and that for vocal music, including operatic music, narrative music and regional music (Yu, 1999, p.309). Training in instrumental music has appeared to be the focus of the

programmes offered by the Music Office.

1.1.3 Popular music

Besides Western music, Chinese traditional music and Chinese music, Canto-pop, a kind of popular music sung in Cantonese has also been well received by the Hong Kong youngsters (Fung, 1999/2000). Long before the advent of Canto-pop, there were various kinds of popular music: for example, Mandarin pop, sung in Mandarin, was very popular in the 1950s, while English pop, sung in English, came to the fore in the 1960s (Ho, 2003; B. Y. Leung, 1999). It was in the 1970s that Canto-pop started to develop. It began with Sam Hui, leader of the band "Lotus", who composed and sang in Cantonese. He promoted Canto- pop in the newly established Television Broadcast Limited (TVB) (Chow, 1999, p. 412). Following the popularity of Cantonese songs from TV dramas of the 1970s, Canto-pop flourished and became very popular in Hong Kong (Ho, 2003, p.147). Recently, two local girls, called the Twins (Chow, 2001 380), sold a record 50,000 copies of a CD in two weeks. Canto-pop is very well liked and may be heard on both government- sponsored and commercial radio stations. Radio Television Hong Kong (RTHK), the government -sponsored radio station, began broadcasting Canto-pop on a specific popular music channel - RTHK2 – in 1974. Another commercial radio station, Commercial Radio (CR), began broadcasting a twenty-four hour Canto–pop channel in the mid-1980s, while Metro Broadcast Hong Kong has broadcast Canto-pop since 1991. The promotion of Canto-pop has significantly contributed to its dissemination via the radio. It has been the main trend in popular music in Hong Kong since the 1970s. Furthermore, annual awards and presentations for Cantonese songwriters, music productions, best-selling albums, and singing competitions, organized by various organizations including radio stations, have all helped to promote and establish Canto-pop. The rise of Canto-pop has reassured Hong Kong people regarding their Cantonese cultural identity. As a result of its roots in the local culture, Canto-pop possesses its own particular type of authenticity, and has thus superseded English pop and Mandarin pop on the Hong Kong pop music scene (Ho, 2003).

The rise in popularity of Canto-pop has triggered business opportunities in the local and international music industries (Leung, 1999; Chow, 1999; Ho, 2003). Huge profits have been made in promoting local songs and artists. Canto-pop singers have become actively involved in certain aspects of the entertainment business, such as music production and distribution, film production, show business and artist management, organized and promoted by international and local record companies (Ho, 2003, p.148). Becoming involved in the entertainment business through Canto-pop is an extremely attractive prospect for young people, who see it as a possible road to success.

The above account of the music scene in Hong Kong indicates that both Western and Chinese music have their place in the community. However, Hong Kong people's exposure to Western music has been broader and much more comprehensive, given that Western music has been established in the province since 1841. The emphasis of the position of Chinese music in the community and at schools since 1997 is a direct result of the promotion of Chinese culture after the return of the sovereignty.

1.2 Music in Hong Kong Schools

In this section, I discuss music in Hong Kong schools, particularly in secondary schools. Before this, I will give a brief introduction on the context of education in Hong Kong with particularly attention to teaching and learning styles within Hong Kong secondary schools. Then, I give special attention to the teaching of Chinese music in the secondary school, Chinese music syllabuses, teachers' preferences, attitudes and the enacted curriculum, school music activities and students' responses, and the problems of teaching Chinese music. All these accounts demonstrate that music teachers are in a dilemma regarding the teaching of Chinese music. Therefore the need to formulate teaching strategies that help students to have meaningful and personal musical understanding of Chinese music is the core of this study.

1.2.1 Educational Context of Hong Kong

According to Cheng (1997), there are five sectors in the system of Hong Kong education, namely, "pre-school education, general education, technical education and vocational training, higher education and adult education" (Cheng, 1997, p.25-26). The pre-school education includes kindergartens and nurseries. The nurseries cater for 3 year olds, and the kindergartens for 4 to 6 year olds. Children between 6 and 11 attend Primary School (Primary 1-6), and adolescents between 12 and 18 attend Secondary School (Secondary 1-5). There is an additional two-year pre-university sixth form (secondary 6 and 7) preparing students for entrance to higher education institutions. Higher education includes degree and non-degree programs after secondary schooling.

According to Salili, F., Zhou, H., & Hoosain, R. (2003), Hong Kong classrooms are very crowded but students can be very disciplined. Teachers commonly believe that they have to be stern and keep a distance from the students so as to get a full control of the class. Students are given a huge amount of daily homework since the traditional cultural belief is that the best way to learn is by memorization and repeated practices,

Teaching methods in Hong Kong are mostly didactic like lectures. Assessment is in the forms of competitive tests and unseen examinations (Watkins & Biggs, 1996). However, emphases on new child-centred teaching methods are being encouraged and included in teacher training programs, as a result of education reform (Salili, F., Zhou, H., & Hoosain, R., 2003).

There are generally three features of music teaching and learning styles within Hong Kong schools. They are first, the lack of performing activities (Ng and Morris, 1998), second, insufficient emphases on creative music making (Leung, 1999) in the secondary schools and third, the show of achievement-oriented, teacher-centred music teaching in primary schools (Wong, 2002).

Ng and Morris (1998) found that performing was not popular in class due to the noise produced during performing and a lack of music expertise. Listening activities allowed teachers to transmit knowledge, to conduct written assessments and to get control over the class, and thus were welcomed by most music teachers. Creative activities were not as common in Hong Kong as in the United Kingdom, the United States and Australia (Leung, 1999). Leung (1999) found that music activities such as singing and instrumental playing were popular in junior and senior secondary schools with a percentage of 40.55 percent and 34.93 percent respectively. In a comparison of the content and pedagogy of music lessons of ten elementary schools in Vancouver and primary schools of Hong Kong, Wong (2002) observed that an enjoyment-oriented, child-centered approach in Vancouver nurtured Children's interest and creativity. On the contrary, an achievement-oriented, teacher-centred approach to music in Hong Kong led teachers to emphasize knowledge and skill mastery. Wong (2002) recommended that a more student-focused approach should be encouraged so as to nurture students' interest and enjoyment of music. The four learning targets namely "Developing Creativity and Imagination", "Developing Skills & Process", "Cultivating Critical Responses" and "Understanding Arts in Context" through Arts education (Council, 2002, 2003) introduced in the recent education reform of Hong Kong required teachers to approach music with a more student-centred approach, and provided students with opportunities to understand music critically.

1.2.2 Music syllabuses in Hong Kong secondary schools

In Hong Kong, the content of music teaching is outlined in secondary school music syllabuses (Authority, 2004; Committee, 1987; Council, 1992; Council, 1993; Curriculum Development Council, 1983). The syllabuses cover wide areas of both Western and Chinese music, intending to provide a balanced curriculum between the two.

For secondary schools there are five music syllabuses listing the teaching contents for different levels. Three of them are for public examinations (Authority, 2004; Committee, 1987; Council, 1992; Council, 1993) and the other two are not (Committee, 1987; Curriculum Development Council, 1983). Traditions of both Western and Chinese music are included in all the syllabuses. Suggestions on the implementation of the teaching contents are also given. Teaching methods and presentation of lessons are left to the preference and interest of individual teachers. Moreover, teachers are under no obligation to follow the syllabuses except those for public examinations.

Form I-III Chinese music in the syllabuses

The music syllabus for Form I-III (Curriculum Development Council, 1983) is a suggested syllabus only. The teaching content of this syllabus is set out in three stages for F.1 to F.3 students between 12 to 15 years old.

Teachers are not bound to complete all listed teaching content under the basic activities of (1) Singing, (2) Music reading, and (3) Listening. Neither are they obliged to teach playing musical instruments, creative music making, music and movement or to organize extra-curricular activities. However, Chinese music is meant to be taught mainly through listening.

The teaching content of Form I-III Chinese music stated in the syllabus (General Music Syllabus, 1987) is set out in Table 1-1: Teaching contents of Chinese music for Form I-III (General Music Syllabus, 1987).

Figure 1-1: Teaching contents of Chinese music for Form I-III (General Music Syllabus, 1987)

	Singing	Music Reading	Listening
Stage I	Chinese folk songs	Sight –singing of pentatonic examples	Chinese Folk Songs, Chinese operas and operatic songs, Chinese musical instruments and instrumental music,
Stage II	No mention	No mention	Music in the Chinese tradition: • 5 units of Chinese instrumental music; • 13 units of regional folk music; • 7 units of regional folk songs

	Singing	Music Reading	Listening
Stage III	No mention	No mention	Music in the Chinese tradition: • 15 units of operas and operatic songs from selected regions; • 5 units of regional 'ballads'; • 5 units of Chinese music theory focusing on the development of the Chinese tonal system and its differences from Western and regional ethnic tonal systems.

In stage I, the singing of Chinese folk songs that carry a special national or regional flavour is suggested. For listening, both vocal and instrumental Chinese music are covered. Chinese vocal music includes folk songs, operas and operatic songs, while Chinese instrumental music includes: (a) wind instruments such as *di* (笛), *dongxiao* (洞簫), *sheng* (笙), *guan* (管) and *suona* (嗩吶); (b) bowed string instruments like *erhu* (二胡), *gaohu* (高胡), *zhonghu* (中胡), *dahu* (大胡), *dihu* (低胡), *gehu* (革胡), *banhu* (板胡) and *jinghu* (京胡); (c) plucked string instruments like *guqin* (古琴), *zheng* (箏), *pipa* (琵\u29750 琶), *liuyezin* (柳葉琴), *ruan* (阮), *yueqin* (月琴), *qinqin* (秦琴), *sanxian* (三弦) and *yangqin* (洋琴); and (d) percussion instruments such as *gongs* (鑼), *drums* (鼓), *cymbals* (鈸), *muyu* (木魚), *banzi* (梆子), *paiban* (拍板)and *bells* (碰 玲). Related theoretical and historical aspects are introduced in the course of listening, with emphasis on the development of the instruments, tonal characteristics and playing techniques (Curriculum Development Council, 1983, p.6-7).

In stage II, Chinese music activities centre mainly on Listening. Chinese instrumental music focuses on traditional and modern Chinese orchestras, instrumental ensembles, instrumental ensembles in unison and Chinese concertos. Regional folk music includes folk music from different areas and ethnic groups such as *Guangdong* (廣東), *Chaozhou* (潮州), *Kejia* (客家) , *Fujian* (福建), *Suzhe* (蘇浙) and *Shandong* (山東). Regional folk songs refer to folk songs from ethnic minority groups.

In stage III, the Listening content consists mainly of vocal music. Examples are operas and operatic songs from *Guangdong* operas (粵曲), *Chaozhou* operas (潮曲), *Beijing* operas (京曲), *Yueju* (越劇曲調), *Kunqu* (崑曲), *Guangdong hanjuqudiao* (廣東漢劇曲調), as well as regional ballads such as Guangdong *nanyin* (廣東南音), *muyu* (木魚), *longzhou* (龍舟), *Suzhou pingtan* (蘇州評彈)and *Shangdong dagu* (山東大鼓). For music theory, students learn the development of the Chinese tonal system and its differences from the Western and regional ethnic tonal systems.

Chinese music of Form IV-V General Music Syllabus

For F.4 and F.5, the General Music Syllabus applies. This is an extension of the F.1-3 suggested music syllabus. It aims to train students to become active listeners. Aesthetic sense and a creative mind are to be developed through the participation in listening activities, singing and the playing of musical instruments.

Music lessons comprise six main activities: singing, instrumental playing, listening, aural training and music reading. Creative music making and music projects are recommended (Committee, 1987). Teaching contents are also suggested under Listening and Music Project (Committee, 1987).

The syllabus suggests that the Chinese music tradition can be introduced through listening under the topics of "The Growth of the Orchestra" and "Genres in Chinese Music". Traditional solo instruments (傳统獨奏古器) and their well known repertoires are listed for reference, for example, *You Lan* (幽蘭) for gugin (古琴), *Shimianmaifu* (十面埋伏) for *pipa* (琵\u29750 琶) and *Jiangheshui* (江河水) for *shuangguan* (雙管). Other popular pieces for *sheng* (笙) and *hendi* (橫笛) are also included.

In the part called "Genres in Chinese music", in-depth studies on topics listed under Listening Activity in the F.1-3 syllabus are suggested. These topics

include *Beijing* opera (京劇), *Guangdong* opera (粵曲), *Kunqu* (崑曲) under the category of Chinese opera (戲曲); *Tanci* of the *Jiangsu* province (江蘇彈詞) and *Guangdong nanyin* (廣東南音) under narrative music (說唱曲藝); Gong and drum music of *Chaozhou* province (潮州大鑼鼓) and that of Eastern *Zhejiang* province (浙東大鑼鼓) under *Chuidayue* (吹打樂); *guqin* (古琴), *guzheng* (古箏), *erhu* (二胡), *gaohu* (高胡), *di* (笛) , *pipa* (琵\u29750 琶), and *yangqin* (洋琴) music under solo instruments (獨奏樂器).

Music projects described in the syllabus are mainly group projects. Their objective is to provide students with opportunities to explore topics more deeply and to share their learning outcomes. However, there are no suggestions on how the projects can be developed and carried out. Only topics are listed. These include: "Style of Ancient and Modern Chinese Music, (古今中國音樂風格)", "Development of Chinese Opera (中國戲劇發展) " with subtopics such as "*Gewuxi* of the Tang Dynasty (唐歌舞戲) ", "*Nanzi* of the Song Dynasty (宋南戲) ", "*Zaju* of the Jin and Yuan Dynasty (金元雜劇) ", "*Chuanzi* of the Ming Dynasty (明傳奇) ", "*Junju* (崑劇) ", "*Beijing* opera of the Qing Dynasty (清京劇) ", etc.

It has been pointed out that all the above topics are very academic in nature, and that a very strong background in Chinese literature is required to understand them (Yu, 1999). It is also very difficult to provide students with music excerpts of *Gewuxi* of the Tang Dynasty (唐歌舞戲), *Nanzi* of the Song Dynasty (宋南戲), *Zaju* of the Jin and Yuan Dynasty (金元雜劇), *Chuanzi* of the Ming Dynasty (明傳奇) as most of the music is long lost.

Figure 1-2: Teaching contents of Chinese music for Form IV-V (General Music Syllabus, 1987)

	Listening	Music Project
Teaching Contents	Suggested Topics: • Development of Chinese orchestra and its music tradition • Traditional ancient solo instrument • Regional music systems since the Qing Dynasty • Modern national instrumental ensemble • Genres in Chinese Music Operatic music Narrative music Chuida Yue Solo instruments	Examples: 1. Style of Ancient and Modern Chinese Music 2. Development of Chinese opera

The HKCEE (Hong Kong Certificate of Education Examination) Music Syllabus

The HKCEE Music syllabus is an examination syllabus revised regularly by a committee with members from secondary schools, music professionals from universities and the staff of the Hong Kong Examination and Assessment Authority. The HKCEE music examination leads to the admission to university.

The examination consists of three compulsory papers: Paper 1-- Practical Test (15%, 10 minutes in duration), Paper 2-- Listening Test (25%, 1 ½ hours) and Paper 3--Theory & History of Music (25 % for theory and 35 % for History of Music, 3 hours) (Authority, 2004).

Paper 1 can be exempted if a candidate has achieved certain standards in any instrument or voice or practical musicianship (Authority, 2004).

For Paper 2: Listening, candidates have to choose one excerpt on Chinese music for every three excerpts on Western Music. Short questions are set on music elements such as rhythm, melody tonality, and instrumentation, in relation to historical context.

The first section of Paper 3 is mostly on the theory of Western music. Candidates are expected to demonstrate the "ability in musical creativity and basic melodic/harmonic writing skills" and "knowledge of a regular range of standard orchestral instruments" in doing this paper (Authority 2004, P. 329). In Section B, the History of Music, candidates must answer questions on (a) Western music, and are given a choice between either (b) Chinese music or (c) Contemporary music.

Tests on Western music require candidates to demonstrate their musical knowledge in the form of (a) discussion of specific music genres such as sonata and concerto grosso overture; (b) compositional devices such as single-line melody writing in the form of theme and variation, extension and completion of given melodies ideas.; and (c) simple 4-part harmonization.

For Chinese music tests, candidates have to demonstrate their musical knowledge through the appreciation of specific works of traditional and contemporary instrumental music. They are required to answer questions related to "the musical genre, the instruments, the musical background and the performing practice" (Authority 2004, P. 331). Knowledge about Chinese music seems to be the whole objective of the syllabus. Other skills required for Western Music, such as composing, seem not to be necessary here.

The AS (Advanced Supplementary) Level & The A (Advanced) Level Music syllabuses

These two syllabuses prepare Secondary 6 and 7 students for the Advanced Supplementary Level Examination or the Advanced Level Examination of the Hong Kong Examinations Authority. The committee compiling the syllabuses includes members from various education sectors, such as school heads, practising teachers, lecturers from tertiary institutions, staff of the Curriculum Development Institute, Examination Authority, as well as parents and employees.

The two syllabuses are identical except that the number of units to be taken by the candidates is different. AS Level candidates have to attempt a total of two units, while A Level candidates are required to do four. Candidates of both syllabuses are expected to demonstrate an understanding of the language of Western and Chinese music through analytical listening, discussion of music in relation to its context, historical background and the writing of Western music.

Elements of Chinese music are incorporated under General Skills, Musical Styles, Cultures, Historical Developments and Chinese Music. A wide range of choices is offered to students in the unit of Chinese Music (Council, 1993) and expectations are clearly outlined. For example, it is stated that candidates should be able to demonstrate their knowledge in Chinese music by discussing the musical styles, cultural contexts and performance practices of well-known works by Chinese composers in the areas of instrumental music, operatic music, narrative music and modern works. Or they should be able to do so by discussing the development of Chinese music in relation to influences from politics, philosophy, composers, theorists and performers.

Figure 1-3 Syllabus Content of the "Chinese Music" Unit

Topics	Emphases and expectations
History of Chinese: • Legendary and Neolithic Period to the Qin (秦) Dynasty (c.6000 to 206 B.C.) • Han to Sui Dynasty (漢至隋) (206 B.C. to A.D.618) • Tang and the Five Dynasties (唐、五代) (A.D. 618-960) • Song and Yuan Dynasties (宋、元) (A.D. 960-1368) • Ming Dynasty (明) (A.D. 1368-1644) • Qing Dynasty (清) (A.D. 1644- 1911) • The Modern Period (現代) (A.D. 1911 to present)	Candidates are expected to discuss the political influences of the development of court music, the music of literati, and folk tradition, found in the listed historical periods of China, with reference to representative composers, theorists and performers.

The implementation of the Chinese music syllabus and students responses towards music will be discussed in the following sections.

1.2.3 Teaching preference, attitudes and the enacted curriculum

Music has been part of the Hong Kong primary and secondary school curriculum for many years. Up until 1997, there had been few studies dealing with the music taught in Hong Kong schools. However, the studies carried out by Foo (1973), Mui (1984), Ryan (1987), Wong (1990), Ho (1996a, 1996b) and Ng (1995) provide an outline of the subject. Ryan (1987) carried out a survey of music education provision for Hong Kong students and also of their musical preferences. He sent a total of 896 questionnaires to students, receiving 594 completed questionnaires suitable for statistical analysis. By music provision, Ryan meant music tuition provided by the school, the music lessons that were scheduled in the school timetable, private music tuition received by students

outside school hours, and the availability of music rooms in schools. Ryan had hoped to find that students' musical preferences included listening to "classical music", that is, 'art music' rather than popular music; and that students were involved in extra-curricular musical activities, such as going to concerts and taking part in musical activities outside school, and that they were willing to take public music examinations. He found that the quality of music provision had a direct impact on the students' musical preferences. The students' musical preferences were directly related to the amount of music provision they received. The students' enjoyment of music and going to concerts in particular were positively related to an increase in music provision both inside and outside school. Ryan found that not many students liked classical music. His sample of students also considered music to be less important than other subjects and other extra-curricular activities. In addition, Fung (1998) also pointed out that very few students took public examinations in music.

Mui (1984) found that only 78.96% of secondary schools offered music for Form One to Form Three students. Music teachers did not have to prepare

students for public examinations. The allocation of time for music was minimal compared with subjects such as languages or mathematics (Wong, 1990).

In the run-up to 1997, Ho (1996b) carried out a survey to determine the nature and content of the Hong Kong music education system by investigating the perception of teachers regarding various styles of music: Western "classical" music, Chinese "classical" music, Hong Kong contemporary "serious" music, "folk" music, "popular" music, "world" music and the promotion of civic education. 210 questionnaires were sent out to schools and fifty percent of these were returned. A total of sixty music teachers responded. The survey results indicated that music teaching in Hong Kong schools centred on the teaching of Western classical and folk music, which overshadowed other musical styles, such as popular music, or contemporary Hong Kong music. This was said to be an example of the effect of the British colonization of Hong Kong on formal music education, with its emphasis on Western styles of music. In consequence, Chinese music was regarded as inferior to Western music (Ho, 1996b).

The Hong Kong Certificate of Education Examination (HKCEE) is a compulsory examination for all Hong Kong secondary school graduates, while the Hong Kong Advanced Level Examination (HKALE) is the entrance examination to universities in Hong Kong, and The Hong Kong Advanced Level Examination (Advanced Supplementary) HKALE (AS) is a supplement of the HKALE.

Out of the total of more than 120,000 students who took the HKCEE examination in 1966, only 148 students took music (Authority, 1996b). Similarly, only 18 students out of more than 30,000 students took music in the HKALE, or the HKALE (AS) in the same year (Authority, 1996a). Passing music in the HKALE is not a requirement for taking music at university level. This showed that music did not have the status of other subjects in Hong Kong.

However, Fung (1998) observed that there had been an increase in Chinese music content in the HKCEE music syllabus since 1989. Only 2% of the content of the 1983-1988 HKCEE music syllabus consisted of Chinese music; however, a Chinese music percentage of 21-28% was found in the music syllabus between 1989 and 1997. This increase was obvious from the essay topics (Fung, 1998, p.205). From 1995, it became compulsory for students to answer at least 13.75% of questions on Chinese music in the HKCEE music exam papers. There has been a steady increase in the minimum percentage of Chinese music required, and a steady decrease in the maximum percentage of Western music between 1983 and 1997. More choice of questions on Chinese music was offered to students in the HKALE and the HKCEE music exams. However, Fung (1998) claimed that this increase in Chinese music content in public music exams as a means of establishing the cultural identity of Hong Kong would not be sufficient to ensure an increase in the Chineseness of Hong Kong.

After the return of Hong Kong to China, the number of studies and publications about Hong Kong music education increased. Concerns of balance between Western and Chinese music at school level grew after 1997 (Cham-Lai, 1999; Curriculum Development Institute, 1998; Fung, 1998; Ho, 1996a, 1996b; Lam, 1999; Leung, 2002, 2004; Li, 1999; Ng, 1995; Y. F. Ng, 1998; Wong-Yuen, 2000; Yu, 1999; Yu-Wu, 2000).

The survey report (Curriculum Development Institute, 1998) on the implementation of the music syllabus for Form I-III Hong Kong secondary schools was conducted by the Curriculum Development Institute in 1998. It was the first official survey to be carried out. It provided important data regarding music education in Hong Kong junior secondary schools in general. Recommendations for further improvement were also made.

In the survey (Curriculum Development Institute, 1998), two sets of questionnaires were sent to 415 secondary schools, and the response rate was 80%. One set of questionnaires was for music teachers, while the other was for the music panels. Data on schools (such as type of school, percentage of schools with no students participating in Music Examinations (HKCEE, AL or AS), music teaching resources, extra-curricular music activities) and data on teachers (including gender, highest academic qualification, opinions and suggestions regarding the Forms I-III Music Syllabus) were collected.

With regard to the teachers' opinions about the Forms I-III Music Syllabus, it was revealed that Chinese traditional music was seldom taught at this stage of schooling, and that teachers considered Chinese music to be the most difficult area to teach. Within that area, Chinese operas were deemed particularly challenging (Curriculum Development Institute, 1998).

Another similar survey (the Survey of Music Teaching in Middle Schools: Zhongxue yinyue jiaoxue diaocha中學音樂教學調查) was conducted in 1999 by Cham-Lai (Cham-Lai, 1999). In this survey, questionnaires were sent to 422 secondary schools. 203 replies were received, of which 160 were completed by music specialists. The findings revealed that 188 schools offered music as a subject. They also confirmed the fact that the teaching of Chinese music was difficult and not common. Traditional Chinese music was simply not the favourite music of the young people of Hong Kong (Cham-Lai, 1999). Data on the frequency of Chinese music appreciation activities in the schools were not encouraging. 23.13% (37 replies) of the respondent schools said the activity was frequent; 60% (96 replies) said they had the activity sometimes; 16.25% (26 replies) said they never had that activity at all, while 0.62% (1 reply) of the respondents had no opinion regarding this statement. The percentage of respondents who considered their teaching of Chinese music to be unsuccessful was high. 109 respondents said it was not successful (68.13%); 46 respondents said it was successful (28.75%), while 5 respondents said they had no opinion (3.12%).

Unsuccessful teaching was attributed to the following reasons:

Teachers do not have sufficient knowledge of Chinese music. (70 replies: 64.22%)

No suitable teaching methods (48 replies: 44.04%).

Lack of reference materials & teaching materials (65 replies: 59.64%).

Students are not interested (57 replies: 52.29%).

Students consider Chinese music to be out of date (61 replies: 55.96%).

Following the results of these two surveys, concerns about the practice of Chinese music in Hong Kong schools grew. Brand & Ho (1999) examined the changes in music education in Hong Kong after 1997 on the basis of resources such as selected textbooks, related music educational government documents and policies, school syllabuses and related studies. They concluded that there had been no drastic changes in the practice of music in Hong Kong schools. Practices common on the mainland were not found in Hong Kong: for example, the singing of patriotic songs in schools. These songs were not included in Hong Kong music textbooks. Nevertheless, the promotion of the PRC's national anthem in schools was observed. It served to arouse the students' awareness of their national identity.

Besides this, the Education and Manpower Bureau (EMB) worked hard to promote Chinese music, including Chinese opera, hoping that students would learn to appreciate and value their culture (Brand, 1999). The EMB produced a CD-ROM of Chinese stringed instruments (Leung, 2000) in 2000, published teaching materials and broadcast a series of thirty-nine programmes on Chinese music in collaboration with the Radio and Television Company of Hong Kong (Tsui, 1998) in 1999, and organized professional workshops and seminars for teachers teaching Cantonese opera (Brand, 1999). Furthermore, the EMB placed a new emphasis on the teaching of traditional Chinese music. For example, it produced a CD-ROM for teaching Cantonese Opera in 1997 (Lee, 1997), conducted pilot studies on teaching Cantonese opera in eight secondary schools and eight primary schools in 1997-8 and 1998-9 respectively, and tested teaching materials related to Cantonese opera in the classroom in 1999

(*Ta Kung Pao*, 5 November, 1998). All these measures addressed the difficulties that teachers have in teaching Chinese music, especially traditional Chinese music.

However, surveys indicated that Hong Kong schools did not look favourably on the teaching of Chinese music (Cham-Lai, 1999; Curriculum Development Institute, 1998; Ho, 1996b; Leung, 2004). In December 1999 and March 2000 Leung (2004) sent a questionnaire on Chinese music education, consisting of 81 questions that covered aspects of Chinese music teaching, to the music teachers in 426 secondary schools in Hong Kong. 209 responses were collected from a total of 406 schools. From the data collected, 38.2% of the respondents indicated that they would like to have not more than 20% of Chinese music taught in secondary schools. Furthermore, support for having Western music training in teacher education was higher than for having Chinese music training. 38.2% of the respondents favoured a ratio of 1:1 between Western music and Chinese music; 31.9% of the respondents preferred a ratio of 2:1 between Western music and Chinese music. 24% of the respondents indicated that they would prefer a ratio of three times or more Western music to Chinese music. This strong preference for Western music among music teachers in schools was supported by the teachers' claim that both the parents and the students favoured learning Western instruments over learning Chinese instruments (Leung, 2002).

For the Form IV-V General music syllabus and syllabuses for public examinations, there has been no thorough study on the teaching approaches that teacher use in teaching Chinese music. However, the number of students taking the two public examinations has been noted to be extremely small (Curriculum Development Institute, 1998; Lam, 1999; Yu, 1999). An examination of the relevant syllabus (see 1.2.1) suggests a rather informational approach in introducing aspects of traditional Chinese music to students.

1.2.4 School music activities and students' responses on Chinese music

The above report on unfavourable conditions for Chinese music in schools was highlighted by the study done by Brand & Ho (1999). Brand & Ho (1999) pointed out that Western music was favoured in schools. They compared the numbers of entries and participants playing Western music solo, and as part of a duet or an ensemble (excluding piano solos and duets) and of those playing Chinese music, including solo, duet and ensemble, collected in the *48th Music Festival Statistics*, 1966 (Association, 1996) and the *51st Music Festival Statistics*, 1999 (Association, 1999). The figures for Western instrument entries in 1996 were 2,723 entries and 2,960 participants, while those for Chinese instruments were 1,155 entries and 1,470 participants. The ratios of Western to Chinese entries and participants in 1996 were 1.96:1 and 2:1. The entry figures for Western instruments and Chinese instruments in 1999 were 3,874 and 1,795 respectively, while the figures for participants playing Western instruments and for those playing Chinese instruments were 5,180 and 1,925 respectively. The ratio of Western to Chinese instrument entries was 2.16: 1, while the ratio of Western to Chinese participants was 3:1. It was obvious that participation in Chinese ensembles had decreased as compared with participation in Western ensembles after the change of sovereignty (Brand, 1999). However, Lee (1999) pointed out that the number of students taking part in the Chinese instrumental competitions in the Hong Kong Speech and Music Festival had increased since 1962. Lee (1999) also mentioned that in 1962, only 15 participants entered the solo competition in the classes of *pipa* (琵\u29750 琶), *zheng* (箏), *huqin* (胡琴), *xiao* (簫), *dizi* (笛子) and Chinese music playing (*hezou*合奏), whereas in 1996, there were 220 participants for *zheng*, 142 for *pipa*, 108 for *liuyeqin* (柳葉琴, a plucked stringed instrument), 47 for *zhongruan* (中阮, a plucked stringed instrument), 72 for *yangqin* (揚琴, a kind of stringed instrument like dulcimer), 207 for *erhu* (二胡), 177 for *dizi* and 23 each for *xiao* (簫) and *sheng* (笙). There were also 24 secondary school Chinese orchestras (*Zhongxue yuedui*中學樂隊), 3 primary school Chinese orchestras (*Xiaoxue yuedui* 小學

樂隊), 11 *pipa* ensembles (*pipa hezou*琵琶合奏) and 21 *erhu* ensembles (*Erhu hezou*二胡合奏) (Lee, 1999). The number of students involved in making Chinese instrumental music had increased tremendously.

However, the number of students participating in Chinese music ensemble and opera classes in extra-curricular activities does not reflect the real picture of engagement with Chinese music in Hong Kong Schools. It has been said that Chinese music appears in syllabuses only (Yu, 1999).

1.2.5 The problems of teaching Chinese music in Hong Kong school

Ng & Morris (1998) commented that music teachers in Hong Kong schools were overly concerned with the common practice of written assessment in Hong Kong. Emphasis was put on how much students could reproduce in written form. Music teachers transmitted factual information during listening activities and emphasized music theory. By this means, students were able to reproduce factual information in the form of written assessments. An emphasis on the transmitting of knowledge was an obvious consequence of this practice. Leung (2002) reported that the common modes of teaching Chinese music entailed the use of textbooks (64.5%, 209 replies) and recordings (63.6%, 206 replies). Describing the content of programmes (46.6%, 209 replies) and musical characteristics (45.5%, 209 replies) was also common. The emphasis was on acquiring knowledge about music.

In addition to the fact that students were not interested in Chinese music (Cham-Lai, 1999), it was also found that the music teachers were not in favour of teaching Chinese music, and often taught it very superficially (Ho, 2003).

Concerns about controlling students and maintaining classroom discipline made teachers conform to a rather narrow instructional mode of teaching, for example, watching videos, filling in worksheets and listening to music. The teachers claimed that they were able to control and accommodate

large numbers of students more easily using these methods. In consequence, the students were provided with very limited musical experience (Y. F. Ng, 1998).

It is quite possible that the teaching approaches and emphases in teaching music described above are influential in determining whether or not students develop an interest in learning Chinese music, and also in determining whether or not their experience of music is meaningful in any way. It also leads us to ask what kinds of musical experiences are significant in learning music.

In spite of the problems outlined above this, it was reported that in the scheme to promote Chinese opera in secondary schools, (*Zhongxue xiqu tuiguang jihua*中學戲曲推廣計劃), Cantonese opera was said to have been very well received, owing to the innovative methods of presentation. Aspects of Cantonese opera were introduced to students by performing artists (Cham-Lai, 1999). The report went on to claim that the students' lack of enthusiasm for traditional Chinese music could be changed, provided effective ways of teaching it were made available (Cham-Lai, 1999). It is this concern to identify effective teaching strategies for Chinese music, especially Chinese traditional music in Hong Kong secondary schools, that is the heart of this study.

In summary, there are strong Western music traditions in the community and at schools notwithstanding the fact that concerns of Chinese music have captured people's attention in consequence of the return of Hong Kong to the sovereignty of China in 1997.

Hong Kong music teachers share an understanding of the importance of teaching Chinese music. They agree with the rationales of maximizing the students' exposure to Chinese music, of cultivating the students' cultural identity and of transmitting and preserving the Chinese musical heritage by teaching Chinese music (Leung, 2002). However, music teachers are not particularly enthusiastic about teaching Chinese music. They blamed inadequate teaching materials and guidelines for this. Students are not

interested in learning either (Cham-Lai, 1999; Ho, 2003). Nevertheless, it has been argued that it is the teaching approach that affects students' learning of Chinese music. It seems possible that the teaching approaches and emphases in teaching music can change students' learning of Chinese music.

Chapter 2

Theoretical Framework: The Issue of Musical Knowledge

In chapter one, the music context of Hong Kong and Hong Kong schools were introduced. It was found that teaching Western music is the major trend in schools. Teachers lack enthusiasm for teaching Chinese music, although the content of Chinese music teaching was established some years ago. Recently, concerns about Chinese music teaching have added another dimension to the school music curriculum. Teachers have complained that they do not have enough time to cover the music syllabus (Curriculum Development Institute, 1998). The emphasis on Chinese music appears to have caused a congestion of musical knowledge.

It is possible that teachers focus on providing information about Chinese music, because is less difficult to arrange. Factual knowledge can be transmitted in various ways with the help of informational technology devices such as CD-ROMs and audio and audio-visual materials, Power Point and the Internet. The use of such aids allows teachers to cover most aspects of the teaching topics listed in the music syllabuses.

However, music educators in the West have criticized an emphasis on factual knowledge in music teaching (Metcalfe, 1987; Paynter, 1970, 1982; Swanwick, 1992). According to them, the goals of music education should include the acquisition of a personal experience of music, rather than a focus exclusively on acquiring factual, propositional knowledge about music. Such issues have stimulated my enquiry into how Chinese music can be taught effectively within the Hong Kong music syllabus. What should the emphases be? How should Chinese music be taught in order that students gain a meaningful understanding of Chinese music? What counts as musical knowledge?

This chapter briefly discusses some aspects of musical knowledge, touching on the anthropological, sociological, aesthetical and psychological perspectives of musical knowledge. Particular reference is made to Reid, with the aim of clarifying concepts of musical knowledge. Concerns on means and ends of acquiring the personal knowledge of music arise in respect to teaching approaches taken. Then the chapter presents a review of literature on approaches to teaching Chinese music in order to identify particular teaching variables that may be involved in bringing about a personal knowledge of Chinese music. At the end of the chapter, I present these variables, which are the basis for my research with students.

2.1 Anthropological and sociological perspectives of musical knowledge

There have been a number of disputes regarding the function and the meaning of music. These can receive only a brief treatment in this thesis. The ethnomusicologist, Merriam (1964), argued that the function and meaning of music vary in different social and cultural contexts. Music can be an expression of emotion, a means of communication or a type of entertainment. There may be symbolic representations in music and those who are involved in it - the insiders - may interpret the meaning of the music differently from by those who are observers - the outsiders.

Understanding music is not a purely auditory experience. An understanding of the physical behaviour and mental concepts involved in any music practices is crucial and fundamental to understanding music (Merriam, 1964). Shepherd (1977) emphasized the fact that understanding specific musical contexts is necessary and fundamental to a more comprehensive and substantial musical understanding. Stock (1996) argued that it is necessary to comprehend cultural, historical, and social differences in order to have an authentic appreciation of music. Such perspectives of ethnomusicologists have alerted people to the importance of cultural contexts in musical knowledge. Thus

informational aspects of music seem fundamental and necessary.

Walker (1990, 1996, 1998a, 1998b) agreed that knowledge of cultural, historical and social factors was important in understanding the music of other cultures. He asserted that 'music, like language, and everything else humans do, is rooted in culture' (Walker, 1996, P.3). Each musical culture is unique and is neither relevant nor translatable outside its individual cultural milieu. Musical cultures are embedded in socio-cultural conditions, having particular cultural context significance (Walker, 1996). There can be no true understanding of music if the musical beliefs and the cultural context of the music are not perceived and decoded. What one receives are some sounds and an arrangement of sonic materials that carry no meaning for a person who was an outsider to the culture. Walker gave the example of the Balinese *gamelan*, which he said, in Balinese culture, accompany a variety of cultural activities, "There is no one thing called a gamelan. And it is essentially a collection of instruments of ritual, not of concerts, as integral to the particular social-cultural imperatives of Balinese Hindu beliefs as are Balinese puppet-dancing or vocal declamations in their performances of the 'Ramayana' stories" (Walker, 1996, p.8). The appreciation of Balinese *gamelan* should be, in fact, a comprehensive understanding, reflection and expression of a culture rather than regarding *gamelan* as musical "because it appears to have the modern western 'musical' attributes of pitch, rhythm, counterpoint, and other sonic organizations with which we in the West are familiar" (Walker, 1996, p.7).

Walker (1996) further argued that it is inappropriate to perceive music of other cultures using the western sense, and label them as identical with the West. Using the example of types of throat singing of the Inuit or the Tuvinians, Walker argued that there is no point in claiming that the throat singing is identical to the 19th century romantic lied, because the throat-singing does not sound like music in the Western sense of the word. It is better to accept that "the sounds of both lied and throat-singing emanate from the vocal tract, but each requires a different use of vocal articulators and the respiratory system, which in turn produces different physical events. Since each culture has its own cultural embedding and

special physical attributes" (Walker, 1996, p.7). Walker wonders why they need to be labelled identically.

The experience that Blacking (1976) had with the Venda people of the Northern Transvaal in South Africa, particularly the use of songs and dances in girls initiations, further shows that music can tell what is culturally valuable to a people. The symbolic meaning of music and dance tells more about what the Venda people do and the way they think.

It seems then that values, beliefs, and the specific social context of performance practices are crucial to understanding the music of a culture. "Knowing about" seems therefore, to be an important means by which music of other cultures can be thoroughly comprehended.

2.2 Aesthetic and psychological perspectives of musical knowledge

Langer presents an older view, arguing that music is a special kind of knowing - an 'expressional mode of knowing'. She says that music is closely associated with affective and emotional experiences and that the symbols used in music are different from those used in language or in mathematics. Langer says the symbols used in music are presentational. For example, the symbols used in music, such as tonal structures, rhythms, patterns and forms, are close to people's feelings. They are similar to the ebb and flow of the ordinary experiences of individuals. They signify people's understanding of human feelings.

Langer says that the tonal structures we call music:

> "bear a close logical similarity to the forms of human feeling – forms of growth and attenuation, flowing and slowing, conflict and resolution, speed, arrest, terrific excitement, calm, or subtle activation and dreamy lapses – not joy and sorrow perhaps, but the poignancy of either and both- the greatness and brevity and

eternal passing of everything vitally felt. Such is the pattern, or logical form, of sentience, and the pattern of music is that same form worked out in pure measured sound and silence" (Langer, 1953, p.27).

According to Langer the symbols used in music represent human feelings and that it is not necessary for people to have words or verbal help in order to understand human feelings. According to her, music and the arts "make feelings conceivable so that man can envisage and understand them without verbal help" (Langer, 1942, p.222).

Reid (1986) took a different view and suggested that musical knowledge is more than 'knowledge-that', which includes 'knowledge-about and knowledge-how'. 'Knowledge-that' is factual, propositional knowledge. This kind of knowledge allows one to know more about music intellectually. 'Knowledge-about' refers to statements such as 'Beethoven was a German'. It can also be knowledge about the life history of composers, the musical styles of different periods and special treatments of music. 'Knowledge-how' is concerned largely with "how" music is produced. Philpott (2001) claimed that 'knowledge-how' includes the following:

- technical know-how (knowing how to do this or that on an instrument)
- technical skill (the physical ability to carry this out)
- aural discrimination (knowing how to distinguish between sounds)
- perceptual know-how (knowing how to recognize a 'drone')
- presentational know-how (how to present a piece to an audience)
- notational know-how (reading and writing music)
- craft skills (knowing how to make musical sounds in a particular way" (Philpott, 2001, p.21).

Ryle (1963) argued that although 'knowledge-how' has a high profile in

musical learning, 'knowledge-how' and 'knowledge-that' cannot be separated. One is able to manifest and demonstrate the knowledge one has acquired and attained by doing it.

However, Reid (1986) asserted that 'knowledge of arts' was different. He said that there is another type of musical knowledge, which is crucial and important, over and above 'knowledge-that'. This is the 'acquaintance-knowledge' of music. An acquaintance-knowledge of music is personal knowledge of music, resulting from direct contact or acquaintance with music. It is something more than the intuitive appreciation of music. It is an accumulation of knowledge-experience. This kind of knowledge-experience is likely to be tacit. People who have the same experience are able to share an appreciation of music without talking about it. Reid claimed that this kind of personal experience-knowledge of art could not be derived merely from 'know-that' and 'know-how'. It could not be reduced into propositional statements or 'knowledge-that'. He suggested a view of knowledge, which positively asserted that:

> "the truth of true knowledge is not ultimately the conformity of statement with fact – which is impersonal and formal, and exclusive to the knowledge which can be expressed in linguistic statements – but the adequacy of the cognitive grasp of its objects by personal living mind" p.35).

Reid stressed that this kind of cognitive grasp had to be related to feeling and went on to say that the content of feeling consists of three components: cognition, conation and feelings. These three are interrelated and inseparable components of cognitive feeling. Reid clearly describes the relationship between these three components as follows:

> "Cognition, conation and feelings are inseparable aspects or facets of conscious life. We cannot think without conative activity, without some interest in what we are thinking about.

> We cannot actively conate without some object or objects in mind, perhaps vague, but often at least potentially thinkable under concepts" (Reid, 1986, p.23).

> "One cannot appreciate a beautiful shell, or work of art, or a morally compassionate action, except in a total apprehension in which cognition, conation and feelings are working together as one." (Reid, 1986, p.24).

Reid further commented that cognitive occurrences and cognitive experiences are essential to facilitate a personal knowledge of music (Reid, 1986, p.45). People should be exposed to music often. Musical experiences received have to be renewed, fresh and cognitive. Wholehearted individual participation is helpful in the acquisition of musical experiences. He claimed that the vast musical knowledge of experienced musicians was the accumulation of the musicians' frequent musical experiences over a long period of time. He stressed the fact that repeated and varied personal acquaintance with the music are fundamental to the acquisition of a personal knowledge of music. He concluded:

> "My dispositional knowledge of music is not merely general knowledge of fact, knowledge-that. It is concrete knowledge-of, of individuals' knowledge, which possesses the whole person, and it needs to be renewed and added to in fresh experiences, occurrent experiences. There is no way of acquiring dispositional knowledge of music except by repeated occurrent experiences of it". (Reid, 1986, p.46)

To sum up, it seems that the two main groups have different perspectives on musical knowledge. The anthropological and sociological groups consider that 'knowledge-that' is crucial and fundamental in understanding the music of a particular culture, as there are different musical contexts surrounding the practice of music in different cultures. People need to understand the musical context in order to acquire a thorough and comprehensive understanding of the music.

'Knowledge-that' is the key that opens up the channel for the further understanding of the music of another culture. The aesthetic and psychological groups, on the other hand, emphasize the fact that the knowledge of music and knowledge of other art forms are different. 'Knowledge-that' with regard to music provides the background to the music of a particular culture. It helps to direct a person's understanding to the context of the music. But a true understanding of music is acquired through repeated and varied personal acquaintance with the music. It is the acquisition of this acquaintance knowledge of music that produces the musical understanding of the music. A personal knowledge of music may therefore be considered the core of musical knowledge.

2.3 Means and ends of the acquisition of personal knowledge of music

We noted in Chapter 1 that most teachers of Hong Kong tend to focus more on 'knowing that' and 'knowing how' in their music lessons. The above arguments regarding the concepts of musical knowledge give rise to specific concerns regarding teaching approaches. There is a danger of making 'knowledge-that' the core of musical learning (Metcalfe, 1987; Paynter, 1970, 1982; Swanwick, 1992). If this happens the importance of acquiring personal knowledge of music through direct contact with the music may be diminished.

Concern about how to enable students to acquire musical experience when teaching them music is growing, but there has been no agreement on how to achieve this (Philpott, 2001). Swanwick (1979) argued that it is the personal knowledge of music which should be valued when attempting to understand music, and which should be the objective of music education.

Swanwick (1999) argued that the aim of music education is to help students to have direct contact with music, to go beyond the factual information that relates to the music and to facilitate a creative musical conversation. He (Swanwick, 1979, 1988, 1996, 1999) argued that it was not enough for music

teachers to teach knowledge of the cultural contexts, performance practices and value systems of the music of other cultures. He pointed out that music should not be "seen as inevitably symptomatic of other cultural values" (Swanwick, 1996, p.17). He did not agree with "the idea that music stands in a direct relationship with a socially independent reality, as though it were only a kind of mirror" (Swanwick, 1996, p.18). In his opinion, music always takes place within a cultural environment but it is often does so without being "culturally determined" (Swanwick, 1996, p.18).

Swanwick (ibid) said we should therefore look into and interpret music in a more active way.

Swanwick asserted that music enables people to have different interpretations. It is possible that people in one setting comprehend the music of another setting differently (Swanwick, 1996, 1999). In such, people can have different musical experiences, or even to have fun. Teachers should therefore empower their students with the autonomy necessary to experience music using the knowledge and skills they have acquired (Swanwick, 1979).

Swanwick says teachers should engage students in "reflective performance, improvisation, composition and in the critical appraisal of the music of others". In these ways music in schools is:

> "neither a musical museum nor a cultural mirror but a place and space where we facilitate musical conversations and conversations about music (which are not the same thing)" (Swanwick, 1996, p.22).

Central to this study is the view that acquiring personal knowledge of music should be a main aim of music education, including education in Chinese music. The problem for this project is it is not clear which teaching strategies are likely to enhance the acquisition of personal knowledge of music or how the process of acquiring this knowledge can be observed in secondary school

classrooms.

However, it seems possible to identify a number of observational variables. If the acquisition of personal knowledge is affected by direct contact with music, we can expect to observe teaching and learning where the proportion of time involving music making and listening to music is high in relation to that devoted to giving factual information. If personal knowledge involves a direct accumulation of knowledge-experience of music, we can expect to find a teaching approach with little direct teaching and a high level of student autonomy, what Bernstein (1971) calls "weaker framing". We can also expect the music making and listening in music lessons to place the experience of music before rather than after the giving of information, and we can expect repeated exposure to the same music, thus allowing personal or acquaintance knowledge to be formed.

The attainment and acquisition of personal knowledge of music seem likely therefore to depend on and be observed through the operation of four variables: a) the proportion of information-giving to direct musical experience, b) whether the experience of music tends to place music before the giving of information about music, c) the level of student autonomy in musical activities or 'framing', d) the degree of repeated exposure to the same music. Can confirmation of the importance of these variables be found in the literature on the teaching of Chinese music?

2.4 Literature relating to the proportion of information-giving and direct musical experience

The provision of background information about Chinese music and culture is one of the main features of the teaching of Chinese music (Campbell, 1991a; Campbell, 1995; Gary, 1978; Han, 1989; Han, 1992; Huang, 1976; Le Storti, 1980; Mu, 1994; Volk, 1998; Wong, 1974). Background information includes information on such things as the history of Chinese instruments (Wong, 1974), and the music notation of Luogudianzi (Mu, 1994). Such information is

thought to help students understand more about the practice of Chinese music and cultural differences. Provision of such information comes as a result of the rise in importance of ethnomusicology and as a result of the implementation of multicultural music teaching in schools. In multicultural music, authenticity and cultural context are very much emphasized (Volk, 1998).

Sometimes, however, the type of information on Chinese philosophy, society and culture provided to students is sophisticated and intellectual in nature (Gary, 1978; Le Storti, 1980). It can also be remarkably extensive and thorough. In such instances, music is often used to facilitate discussions and to illustrate Chinese quotations and sayings (Gary, 1978; Le Storti, 1980). The cases of Gary (1978) and Le Storti (1980) described here show that the proportion of information given is likely to be greater if the teacher conceives musical knowledge as factual rather than a matter of the acquisition of personal knowledge. The proportion of information given is not mentioned.

Listening to Chinese music is an activity to enhance the learning of Chinese musical features and offer the students the opportunity to engage in direct and intimate contact with the music. Most teachers use music as an illustration to strengthen and consolidate the factual content of the lesson (Anderson, 1989; Huang, 1976; Wong, 1974), or for discussion purposes (Gary, 1978; Le Storti, 1980). In general, the listening activities in the reviewed materials are very functional in nature, with music being used as an illustration, as evidence, for demonstrations and other instructional purposes (Campbell, 1991a; Campbell, 1995; Gary, 1978; Han, 1989; Han, 1992; Huang, 1976; Le Storti, 1980; Mu, 1994; Volk, 1998; Wong, 1974). Musical excerpts often go together with culturally and philosophically probing questions. For example, in a study carried out by Le Storti (1980), students were first asked to listen to three musical excerpts: (1) "The Little Mill", a 5-minute piece of traditional orchestral music; (2) "The Red Lantern", a 3-minute contemporary piece from an opera set during the Sino-Japanese war; and (3) "Cotton Spinning", a 2-minute long traditional song. After that, they were asked to identify the musical differences between the three and state how they differed. On another occasion, the students

watched a film on Chinese culture and were then asked questions such as, "Why do you think such instruments as cymbals and bells are most prevalent in Chinese music? " "Can you notice any similarities between their music and art?" (Le Storti, 1980).

The music samples of Le Storti (1980) are of a high quality, with the music being performed on authentic Chinese musical instruments and in the true Chinese tradition.

Music making also features in Chinese music lessons. Topics dealing with performance are plentiful in the reviewed literature, such as good practice in playing instrumental music, the improvisation of ornamentation (Campbell, 1991a) and the oral approach to instrumental learning (Han, 1992; Mu, 1994). Through playing students become acquainted with various Chinese musical features (Campbell, 1991a; Campbell, 1995; Craig, 1984; Han, 1989; Han, 1992; Mu, 1994; Volk, 1998; Xiaozu, 1998). For example, in Mu's study involving Luogudianzi (1994), the students were guided in reciting the mnemonics of the Luogu. They were then directed to practise a number of selected Luogudianzi. They practised the mnemonics orally in groups, and played the Luogudianzi using the appropriate Chinese non-melodic percussion instruments. They also practised how to transcribe the rhythm formulae into Western notation.

In the case by Volk (1998), students improvised melodies on Western stringed instruments using ornaments such as trills, turns and slides (portamento). The heterophonic and multiple ornamented variation characteristics of Chinese music were grasped and experienced. Music was made and listened to for the purposes of demonstrating specific musical styles and of consolidating the teachers' explanations and the information the students had already been given.

Musical activities such as those described in the above cases may lead to an understanding of Chinese music deeper than that obtained merely by getting the students to make sounds with the instruments. So it seems that students can

then have diverse musical perspectives on Chinese music and make use of Chinese music for expressions.

This kind of pragmatic, practical and hands-on music-making activity provides students with opportunities to consolidate their knowledge of Chinese musical features. However, most of the music-making activities reviewed are limited by their cultural orientation. They are mainly a means of consolidating the 'knowledge-that': knowing 'about' and the knowing 'how'. There is no encouragement to use music expressively or to improvise music in one's own musical context. The acquaintance with music, the personal knowledge of music remains outside the focus of these activities. Campbell (1991b) urged music teachers to re-think the nature of music and music teaching. She said that teachers and students should be aware that music has the potential to be a creative and expressive art form; and to allow students' ideas and impulses to be reflected in the music they create (1991b). She also pointed out that classes and rehearsals can sometimes be autocratic or rigidly dominated by the teacher, with the performance of music mechanically steered by its notation. She said that if music is to maintain its status in the curriculum as one of the creative arts we must provide students with freedom to explore, to attain with their musical skills a personal interpretation of notated music.

Campbell pointed out the dangers of ignoring the creative potential that exists in teaching and learning music:

> "It can also be a mechanical reproduction of sounds that are technically correct but lack feeling and lock out the personalizing human element. The music we select for teaching typically generates re-creative rather than creative response in our students. Likewise, our teaching is often oriented towards the development of skills rather than musical expression." (Campbell, 1991b, P.22)

Is the balance towards practical activity likely to be greater if the teacher

believes that the learning of music involves the acquisition of personal knowledge? Can students experience the musical features of Chinese music through the provision of information on music, or music activities such as listening to music and music making? To what extent can the provision of information on music and music activities help students to become personally acquainted with Chinese music?

2.5 Literature relating to teaching sequence

There are two main approaches to teaching Chinese or any other type of music. One is first to provide information, followed by an exploration of musical features (Gary, 1978; Huang, 1976; Le Storti, 1980; Wong, 1974). For example, in one case study, the teacher initially provided guidelines, materials and resources on "The Sounds of Silk and Bamboo". She then gave out detailed descriptions of the six basic silk and bamboo instruments, namely, the *pipa* (plucked lute), *zheng* (sixteen-string plucked zither), *erhu* (two-string fiddle), *dizi* (transverse flute), *sheng* (seventeen-tube bamboo mouth organ), and *qin* (plucked harp) with pictures attached, as shown in an appendix provided to students.

Information on the playing techniques of the instruments, such as the finger techniques of the *pipa*, the use of sliding notes on the *erhu*, and on the historical associations and classical tradition of the *qin*, formed the core of the lessons. Features of the music were presented as a practical demonstration of the concepts after going through the information. (Huang, 1976)

The other teaching approach opts for presenting musical features first. For instance, in a class on the Chinese percussion ensemble using the drum (Volk, 1998), students began by learning the mnemonics of the Luogu, which is one of the musical features. They then recited and played the chosen rhythm formulae with the Chinese percussion instruments. Provision of information and discussion of the aspects of the Luogu took place after the hands-on experience.

These were intended to further the students' understanding of the performance practice and the contextual background of the Luogu music that they had just experienced.

The two teaching sequences described above are worthy of examination. It seems useful and interesting to find out if the teaching sequence makes any difference to the learning of Chinese music and which sequence is more effective? Answers are likely to be useful for the development of effective strategies for teaching Chinese music.

2.6 Literature relating to weak or strong framing?

Another variable affecting teaching is the strength of framing. This concept comes from Bernstein's theory of weak and strong classification and framing (Bernstein, 1971), where he discusses the selection, classification, distribution, transmission and evaluation of educational knowledge. According to Bernstein, educational knowledge may be acquired through curriculum, pedagogy and evaluation. Curriculum is the content, which is to be learnt; pedagogy is the way in which the content is taught, while evaluation refers to the process of examining the learning experience to see what has become valid educational knowledge.

By classification, Bernstein means the "degree of boundary maintenance between contents" (Bernstein, 1971, p.47). When the classification is strong, it means the boundaries of the contents to be taught are well defined and the contents are insulated from one other. When the classification is weak, the boundaries between the contents are not clear.

According to Bernstein, framing is "the form of the *context* in which knowledge is transmitted and received." "It refers to the degree of control teacher and pupil possess over the selection, organization and pacing of the knowledge transmitted and received in the pedagogical relationship" (Bernstein, 1971,

p.50).

Swanwick adapted Bernstein's concepts and applied them to the teaching of music (Swanwick, 1993). For Swanwick, classification involves the choice of teaching content, while framing refers to the teaching approach. Strong classification implies that students do not have much choice in deciding what to learn. All learning content is decided and implemented by institutions such as the national syllabus, the school, or the teacher. Weak classification, on the other hand, allows greater freedom in the choice of learning activities. Framing is about pedagogy, the structuring and organization of instruction by the teacher (Swanwick, 1993). If the framing is weak, students can have a say in "how and when they will learn a given what." By contrast, if the framing is strong, students will have little say in how the content is to be learnt. The teacher is the one to decide.

As we saw in chapter 1, there is a tendency that strong framing is prevalent among Hong Kong music teachers, who may not be aware of Bernstein's theory. Teachers plan their lessons carefully. Students are guided closely in their musical experience, for instance, when reciting the mnemonics of the Luogudianzi, or when playing selected rhythm formulae of the Luogudianzi, or when trying melodic improvisations (Campbell, 1991b; Han, 1989; Han, 1992; Mu, 1994; Volk, 1998). However, if we see the learning of music involves the acquisition of personal knowledge, we are likely to provide students with more opportunities to have personal contact with music.

The kinds of musical activities that teachers provide should allow students to have a deeper understanding of Chinese music than that obtained merely by getting the students to make sounds with instruments. In addition, teachers should encourage students to use music expressively or to improvise music in one's own musical context.

2.7 Literature relating to repeated listening

According to Reid (1986), knowledge of music may be acquired with repeated and cognitive experiences. Propositional information is not necessary for understanding music. Swanwick (1994, P.45-54) demonstrated this in an experiment with seventy-one students aged between 12 and 13, who listened to an excerpt from Elgar's symphonic piece, *In the South*, three times at weekly intervals, with no information given. He hypothesized that students would change their attitudes on and musical perception of the music, simply by being exposed to it repeatedly. In this experiment, the students showed a significant change in their musical perception of and attitudes towards the excerpt after listening to it three times, despite having been given no information about it.

The literature of Chinese music teaching so far has been suggestive of a number of variables that might affect students' acquisition of personal knowledge. It also provides support for testing whether or not the variables actually affect the acquisition of personal knowledge in music in Hong Kong classrooms. It is the objective of this thesis to clarify what effect each of the following variables has on the acquisition of personal knowledge:

- teaching sequence,
- proportion of teaching time devoted to giving information and to providing musical experience,
- the level of student autonomy or 'framing'.
- repeated rather than one-off listening.

It is hoped that the findings of this study will contribute towards an understanding of the effect that these variables have on "the acquisition of personal knowledge of music", and ultimately the development and formulation of effective teaching strategies to bring about a personal knowledge of Chinese music for Hong Kong students.

Chapter 3

Research Design and Methodology

This chapter explains the design and methodology of the two parts of my fieldwork. The first part of the chapter explains the designs of the four experiments used to test the four hypotheses of the study. The second part describes the subsequent investigation into the students' experience of Luogudianzi under different teaching approaches, what the regular teacher thought about the teaching approaches and whether there were any extraneous concerns affecting how well the teaching strategies encouraged students' personal knowledge of music.

3.1 The main research question and the related hypotheses

Following my analysis of variables seen as likely to affect students' acquisition of personal musical knowledge, the research reported in this thesis set out to answer the following overarching research question:

"'To what extent do the four variables (a) teaching sequence (giving information or providing musical experience first), (b) the proportion of teaching time devoted to giving information and providing musical experience, (c) students' control over music activities or 'framing', and (d) repeated rather than one-off listening', identified from the literature on teaching Chinese music, lead students to develop a personal knowledge of the part of Chinese traditional music called Luogudianzi."

In order to see the extent to which students' personal knowledge of music could be enhanced by any of the four teaching strategies, I developed experiments to test each of the four hypotheses detailed below.

1. The "sequence" hypothesis

Music experience and music information provided in different sequences will have a different effect on students' attitudes towards traditional Chinese music and their understanding of that music.

2. The "proportion-of-teaching-time" hypothesis

Teaching music using different proportions of information and direct experience will have a different effect on students' attitudes toward traditional Chinese music and their understanding of that music.

3. The "instructional-framing" hypothesis

The level of instructional framing, that is the degree of student autonomy allowed in music activities, will affect students' attitudes towards traditional Chinese music and their understanding of that music

4. The "Repeated-listening" hypothesis

Repeated listening will affect students' attitudes towards traditional Chinese music and their understanding of that music

3.2 Follow up work after the experiments for testing the hypotheses

I also wanted to know (a) what the students thought about their experience of the different teaching approaches to presenting Luogudianzi, and (b) what the teacher thought about the teaching approaches and (c) if there were any extraneous factors affecting the development of teaching strategies to bring about students' personal knowledge of music. So, after testing the hypotheses, I set out to answer three subsidiary questions:

1. What did students in various groups think of their experience of Luogudianzi?
2. What did teacher think about the different approaches?
3. To what extent did extraneous factors seem to affect how well teaching strategies brought about personal knowledge of traditional Chinese music?

3.3. Part I: Research design testing hypotheses

This stage of the thesis involved testing the four hypotheses by means of one experiment for each hypothesis. The design of experiments to test Hypotheses 1, 2 and 3 was similar. Experiment 4 to test Hypothesis 4 had a different design.

Before I joined the field of music teacher education, I had taught in two secondary schools for more than thirteen years. One was a government subsidized girls' school while the other one was a government co-educational technical school. I was the only music teacher of the two secondary schools in which I had taught. During this time, I taught Form I to Form III students, who were between twelve to fifteen years of age. I taught them general music which included singing, playing classroom instruments, music appreciation, music history and theory. After that, I joined the field of music teacher education. I have been a music teacher trainer for more than eighteen years. During my service in the music teacher education, I have visited many secondary schools for the purpose of teaching practice supervisions.

As I have visited many secondary schools, I knew it would not be easy for a regular music teacher to teach Chinese traditional music, particularly Chinese non-melodic percussion instruments and Beijing opera Luogudianzi. However, as I knew the level of music in secondary schools and had strong connections with the music teachers in secondary schools, I was able to recruit two schools of similar background to take part in my study. They were the LKS School and LTP School which took part in Experiment 1 and Experiment 2, and 3 and 4 respectively. The teacher of LKS School had been my teacher education student, while the teacher of LTP School had been my classmate in teacher training. Both were interested to take part in my study. With their support, students of the two schools participated in my study.

3.3.1 The design for Experiment 1 testing Hypothesis 1: Teaching sequence

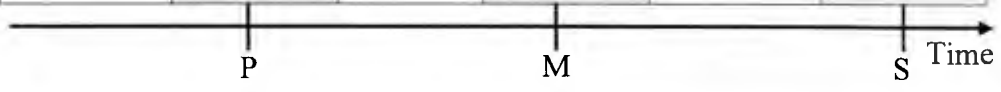
. One hundred and sixty-six secondary two school students from LKS School took part in the experiment. Students were divided into two treatment groups. Each treatment group comprised two classes of secondary two students. There were 41 and 42 students respectively in each class. The students in two treatment groups were matched according to age, gender and academic results.

The researcher and the regular teacher of LKS School each taught one class from each treatment group. They taught a series of four lessons called "The Chinese non-melodic percussion instruments and Beijing opera Luogudianzi". This arrangement allowed me to check whether a different teacher affected students' attitudes towards Luogudianzi in the same treatment groups. Each treatment group took one hundred and fifty minutes to complete the series of lessons. Each lesson lasted 37.5 minutes on average.

The design of the experiment for testing Hypothesis 1 is presented in Figure 3-1 below.

Figure 3-1: The design of experiment for testing hypothesis 1: Teaching sequence

Experimental Group	**Complete questionnaire**	**Treatment**	**Complete questionnaire**	**Continuation of Treatment**	**Complete questionnaire**
Researcher: Class A, secondary 2 students		Teaching 1 (Treatment 1: Information after music experience)		Further Teaching 1 (Treatment 1: Information after music experience)	
Regular teacher: Class B, secondary 2 students					
Researcher: Class C, secondary 2 students		Teaching 2 (Treatment 2: Information before music experience)		Further Teaching 2 (Treatment 2: Information before music experience)	
Regular teacher: Class D, secondary 2 students					



Key

Teaching 1: a unit of four lessons, entitled "Chinese non-melodic percussion instruments and Beijing opera Luogudianzi", using Treatment One.

Teaching 2: Same unit used in Treatment Two

P: Asked students to complete the questionnaire

M: Asked students to complete the questionnaire

S: Asked students to complete the questionnaire

Teaching approaches

To test Hypothesis 1, the major difference in the teaching approaches used for teaching the two treatment groups was the sequence of learning experience. Treatment 1 (for two classes) began with students experiencing the sounds of the non-melodic percussion instruments and the musical features of Luogudianzi, and then my telling about the aspects of the instruments and Luogudianzi. Treatment 2 (for two matched classes) began first with my telling students about the aspects of Luogudianzi, non-melodic percussion instruments and then experiencing the sounds and the features of Luogudianzi.

A summary of the teaching procedures used in the two approaches is shown in Figure 3.2 below:

Figure 3-2: A summary of the teaching approaches used in hypothesis testing 1

Hypothesis testing 1	**Treatment 1: Information after music experience**	**Treatment 2: Information before music experience**
Lesson 1	**1. Students completed the questionnaire** 2. Students experienced the sounds of Chinese non-melodic percussion instruments of Beijing opera: *xiaoluo*, *daluo*, *bo*, and *sadi* (replacement for the *bangu*) in 7 groups. Each group had a set of the four instruments. They noted down how they played the instruments and what sounds they had produced.	**1. Students completed the questionnaire** 2. Teacher told about the Chinese non-melodic percussion instruments of Beijing opera with CD-ROM and real instruments. Teacher invited students to play the instruments under her instruction.
Lesson 2 & Lesson 3	3. Students continued to explore the sounds of the instruments. They noted down the sounds they had produced on a transparency (Appendix A) and performed in groups. 3.1 Teacher demonstrated how to play the instruments with the "beater" of the *xiaoluo* and *bangu*. 3.4. Students followed the teacher. They paid attention to the skills required and the sounds they produced. **4. Students completed the questionnaire at the end of lesson three**	3. Teacher continued to introduce the instruments with CD-ROM, video-clip (Appendix O: Audio Visual Clip 1) and her demonstrations. 3.1 Students played the instruments and produced the special sound effects under her guidance. **4. Students completed the questionnaire at the end of lesson three**

Hypothesis testing 1	Treatment 1: Information after music experience	Treatment 2: Information before music experience
Lesson 4	5. Teacher told about Luogudianzi *Jijifeng* with video clips Appendix P: Audio Visual Clip 2, Appendix Q: Audio Visual Clip 3 & Appendix R: Audio Visual Clip 4). She illustrated how the Luogudianzi highlighted the miming in Beijing opera 6. Teacher continued information of Beijing opera Luogudianzi including its origins, musical notation, the percussion instruments used, its function and basic rhythmic structure. **7. Students completed the questionnaire at the end of the fourth lesson**	5. Teacher told about Luogudianzi *Jijifeng* with video clips (Appendix P: Audio Visual Clip 2 & Appendix Q: Audio Visual Clip 3). She illustrated how the Luogudianzi highlighted the miming in Beijing opera(Appendix R: Audio Visual Clip 4) 6. Teacher continued information of Beijing opera Luogudianzi including its origins, musical notation, the percussion instruments used, its function and basic rhythmic structure. 7. Students played *Jijifeng* under teacher's guidance **8. Students completed the questionnaire at the end of fourth lesson**

Teaching topics and materials used

In choosing teaching topics and materials of Chinese traditional music for my study, I referred to the music syllabus for Form I-III students (Curriculum Development Council, 1983) and the recent research report on the teaching of Cantonese opera: *Yueju Jiaoxue Yanjiu Baogao* (Research report of Teaching Cantonese Opera) in Hong Kong (Xiaozu, 1998). This piece of research consisted of an experiment conducted in May, 1998, led by a committee formed by the music section of the Curriculum Development Committee of the Music Inspectorate, Education Department of Hong Kong, with the objectives of developing the teaching curriculum and materials for Cantonese Opera (粵劇) and Cantonese Arias (粵曲). Eight schools participated in the research.

One of the findings of the report (Xiaozu, 1998) was that the students were interested in learning Luogudianzi, which is a feature of Chinese opera. This finding helped me to decide on Luogudianzi as the teaching topic of my experiments. The reasons were as follows:

1. **Learning Luogudianzi provided students with a better understanding of how Chinese traditional percussion music works with Chinese operatic music**

Luogudianzi is the percussion music that forms a base to the music of all Chinese opera in different regions. The body of knowledge on Luogudianzi is large. According to Zhang (1958), Mu (1994), Lu (1991), Liang (1985) and Han (1992) different sound effects of the Luogudianzi can be achieved by varying the playing technique, the position of the instruments, and the context of the music (especially in Chinese opera). Learning Luogudianzi could help students to get a better understanding of the importance of traditional percussion music in Chinese opera.

2. **Developing musical activities for students to experience Luogudianzi was feasible and manageable**

It would have been possible to choose arias of the Cantonese opera for the experiments, as Cantonese is the mother tongue of Hong Kong students. There was not any language problem in singing the arias. However, it is difficult for boys and girls to sing Chinese operatic arias between the ages of twelve and fifteen. Students' vocal range is too narrow for Chinese operatic arias. Even girls find it difficult to cope with the demands of such a wide vocal range. Moreover, most boys' voices change. It was unlikely that students could sing the arias. If students were confined to listening to the arias, there might be less opportunity for all students to participate in class. Under such considerations, I ruled out Chinese traditional vocal music.

It seemed more flexible, feasible and manageable for me to develop musical activities for students to experience Luogudianzi. Students were able to take part in playing the Luogudianzi; they would be free from physical constraints; they did not have to sing the demanding Chinese arias. Instead, they would have first-hand experiences of Luogudianzi by playing the Luogudianzi with the Chinese percussion instruments, and listening to the Luogudianzi. In addition, Chinese non-melodic percussion instruments were easily accessible and not difficult to master. Playing these Chinese percussion instruments was not as demanding as playing stringed Chinese instruments such as the erhu and the zheng and wind instruments such as

dizi and xiao, which demand a degree of technical proficiency to play the notes, and take time to learn. They were also comparatively less expensive. As a result, I chose Luogudianzi to be the teaching topic of my experiments.

I focused on Luogudianzi in Beijing opera because Beijing opera is the national opera and is the most influential one among other Chinese regional operas. Luogudianzi of Beijing opera has a distinguished status among the Luogudianzi of other Chinese regional operas. It is the origin of the Luogudianzi used in Chinese regional opera. I therefore chose Beijing opera Luogudianzi for my experiments.

The teaching topics in this experiment covered a substantial amount of information on Chinese non-melodic percussion instruments and the Luogudianzi used in Beijing opera. A summary of these topics is as follows:

1. Instruments of Beijing opera

I covered two major categories of instruments in Beijing opera, known as *Wenchang*(文場) and *Wuchang*(武場). *Wenchang*(文場) includes instruments used in lyrical scenes with arias and mime, while *Wuchang*(武場) are instruments used in fighting or war scenes. They involve a variety of non-melodic percussion instruments. I covered other aspects such as sound differences, and the functions and roles of the instruments in the music. For details, see Appendix H.

2. Musical origins of Beijing opera

I traced the source of the Luogudianzi. This included the important musical sources of Beijing opera Qupai (曲牌) which is also known as , Paizi[1] (牌子). There were three major kinds of Paizi (牌子). The first kind of Paizi (牌子) consists of melodies but no Luogudianzi (the rhythm formula), e.g., Fendier〔粉蝶兒〕(white butterfly). The second kind is called Hunpaizi (混牌子) which consists of melodies and Luogudianzi, e.g. Fengrusong (風入松). The third kind consists of Luogudianzi but no melodies. These are known as Ganpaizi (干牌子). See Appendix I.

[1] *Paizi* is the kind of music used in Beijing opera. Details of which were in Appendix I.

3. Luogudianzi in Beijing opera

I covered scoring methods of Luogudianzi including the traditional way of notation by mnemonics and the latest way of using Chinese characters and Romanized Chinese character. I told students the pronunciation of the Chinese characters so that they knew how these Chinese characters corresponded to the sounds produced by the instruments. See Appendix J.

4. The Functions of Luogudianzi in Beijing opera

There are four major functions of Luogudianzi in Beijing opera. They serve as (a) music for fighting or war scenes, (b) music for stylized miming sequences, (c) music for singing and (d) music for recitation. Examples of Luogudianzi and details of them are included as Appendix K.

5. Basic Structure of Luogudianzi

I covered the musical structure of Luogudianzi including one beat and two beats, three beats and four beats. I traced the development of beats of Luogudianzi and various sound effects of the instruments resulting from the control of the instruments while one is playing. This amount of information helped students better understand the musical aspects of the Luogudianzi. Details are provided in Appendix L.

I showed all the students seven sets of Chinese non-melodic percussion instruments so that they could experience the sounds of the instruments. I also showed them a CD-ROM introducing Chinese percussion instruments, and discussing their appearance and the skills needed to play them. I also showed students several video clips of Luogudianzi. One of the video clips demonstrated the Water sound (Appendix R: Audio Visual Clip 4), a specific kind of Luogudianzi which has no rhythmic pattern and is used solely to provide a special sound effect. The other two video clips were both *Jijifeng* illustrations showing how this rhythm formula enhances the atmosphere of exciting action scenes. One featured an actor miming mounting a horse (Appendix P: Audio Visual Clip 2) while the other showed a general playing with his spear (Appendix Q:

Audio Visual Clip 3). I also used a video clip showing the instruments used in the *Wenchang*(文場) and *Wuchang*(武場) (Appendix O: Audio Visual Clip 1).

I asked students to play Luogudianzi *Jijifeng* so that they experienced how *Jijifeng* created a special atmosphere by accelerating the tempo in the middle section, how the *Jijifeng* brought about excitement by contrasting dynamics and added tension by repeating the rhythmic patterns. I also asked students to compose Luogudianzi in order to give them more freedom of musical expression.

Data Collection

The data of students' attitudes towards and musical understanding of the Luogudianzi were collected after the teaching of the four lessons of the unit "Chinese percussion instruments and Beijing opera Luogudianzi" by asking students listened to the test music of Experiment 1 (Appendix S (i): Test Music for Experiment 1) and completed the questionnaire for Variable 1 (Appendix D). The first completion of the questionnaire took place at the beginning of the first lesson before any teaching of the unit. I asked students to complete a questionnaire. The second completion of the questionnaire took place at the end of the third lesson and the third one was at the end of the fourth lesson.

Music used for Experiment 1 testing hypothesis 1

There were two musical episodes of Luogudianzi: *Jijifeng* and water sound for students to listen to when they were completing the questionnaire for testing hypothesis 1.

I chose these two excerpts carefully with special reference to tempo, rhythm, complexity and emotional content of the music. According to Finnas (Finnas, 1989 fall), music for testing should be attractive enough to capture students' attention. The recordings of the test music also needed to be of a high quality. Morrison (Morrison, 1998 Summer) stated the duration of each excerpt should be between 38 and 57 seconds. The tempo of each excerpt was within the range of speed of M.M. = 180 to M.M. =211.

Wapnick (Wapnick, 1980), Hedden (Hedden, 1981), and LeBlanc (LeBlanc, 1981; LeBlanc, 1988; A. C. LeBlanc, R., 1983; A. M. LeBlanc, J., 1983; Sims, 1987) all asserted that youngsters are known to prefer fast music. These two Luogudianzi fitted the criteria. Musically, they were in sharp contrast with each other. The *Jijfeng* gets louder as it gets faster, while the Water sound is quiet and serene throughout with no distinct rhythmic pattern. Both pieces are short, just long enough to sustain interest. The *Jijifeng* is forty-eight seconds in duration while the Water sound is just twenty-four seconds in length. Test music of Experiment 1 is in Appendix S (i): Test Music for Experiment 1.

Questionnaire used for experiment 1

The questionnaire for experiment 1 comprised an attitude inventory for students to indicate their attitudes towards the Luogudianzi, and free written responses on the open questions about their understanding of the Luogudianzi.

According to Oppenheim (Oppenheim, 1992`), an inventory is a list designed to check the respondents' preferences for or feelings towards certain things. There is no restricted parameter of the items for an attitude inventory. Edwards (Edwards, 1957) asserted that the statements on the list should be short, should refer to the past, with factual implications, entail immediate interpretation and avoid irrelevant psychological considerations. Language used should be simple. Wording should be precise. Therefore, I used short and simple sentence in drafting the questionnaire in Chinese. The attitude inventory and the open questions about students' musical knowledge of Luogudianzi were easy to comprehend. Figure 3-3 below shows some of the open questions.

Figure 3-3 Open questions used in the questionnaire for experiment 1

Open questions
Did you like listening to the excerpts?
Could you make any associations when you listened to the music?
Could you discover anything from the music?
Did you learn anything from the music?

Before embarking to the main study, I tried out my questionnaire in a pilot study with a class of secondary-2 students. I asked students to listen

to the test music and complete the questionnaire three times during a single lesson. The first time was at the beginning of the lesson. Subsequent to that, students experienced the sounds of the Chinese percussion instruments in seven groups. Then, I asked students to produce and perform two contrasting musical episodes using the same instrument. After this, students listened to the same test music and completed the questionnaire. Following that, I told students the names of the Luogudianzi used in the two test pieces (*Jijifeng,* Water Sound). I explained the functions of Luogudianzi used in Beijing opera and the skills required to play the instruments and the Luogudianzi to them. Lastly, I asked students to listen to the test music and completed the questionnaire.

Having collected the questionnaires, four final year student teachers of secondary school music education processed the questionnaires. They received training on coding the attitude inventories and ranking the free writing responses on musical understanding of music knowledge from me. I used a t-test to find if there were any changes of students' attitudes towards and musical understanding of Luogudianzi after the lesson by comparing the scores they got in the three sets of the questionnaires. There were statistically significant changes in the students' attitudes. The attitude inventory was able to allow students to show their attitudes towards the music. However, there was a large number of responses left blank to open questions on musical understanding. There were 84 blank responses in the first questionnaire, 57 in the second questionnaire and 86 in the last questionnaire. This may happen according to (Dohrenwend, 1965) and (Loftus, 1982) when students have no idea of what to write. I therefore, added guiding sentences to the open questions to help the students think about what is happening in the music and to draw out a more appropriate answers. I tried the questionnaire once with forty-two F.1 students using the same test music.

I used a t-test to find out which set of questionnaire allowed students to provide more answers. The results comparing the numbers of answers provided by the students from the two sets of questionnaire were statistically significant. There were 14 missing responses concerning attitudes towards

the test music in the questionnaire with the guiding sentences, compared with 22 missing responses in the questionnaire without the guiding sentences. There were 2 missing responses indicating musical understanding in the questionnaire with guiding sentences, compared with 40 missing responses in the questionnaire without guiding. Fewer missing responses revealed that guiding sentences on open questions were useful to students.

As a result, I used guiding sentences on questions for the questionnaire for Experiment 1. I have translated some of the open questions of the questionnaire in Figure 3-4 below. The complete questionnaire for Experiment 1 is shown in Appendix D.

Figure 3-4 Examples of guiding sentences on free writing

Open question	Guiding sentences
"When I hear the music, I want to continue listening.	This is because..."
"When I hear the music, something comes into my mind...	What comes into your mind? What makes you have such associations? (Try to answer with regard to the dynamics, rhythm, melody, instruments, performing skills, form, musical structure, genre, style and personal involvement).

Analyzing data of students' personal knowledge of music on the Luogudianzi

I measured students' "personal knowledge of music" by means of a questionnaire that comprised an attitude inventory and written responses on Luogudianzi. The same four student helpers helped in the pilot study continued to code and analyse the questionnaires of Experiment 1. They each coded and analysed the questionnaires once. This meant that each questionnaire was coded and analysed four times to make sure that the questionnaires were properly analysed.

In analysing the written responses of students' musical knowledge of Luogudianzi, I adopted the eight levels of Audience-Listening Criteria developed by Silva (1998). The Silva instrument was built upon the foundation of the 'general criteria for assessing the musical work of students' by Swanwick (1994), and it has been rigorously tested for assessing activities such as composing, performing and audience listening (Hentschke, 1993; Swanwick, 1994).

Silva developed the Audience-Listening criteria in 1997 from an assessment of student's written responses to Portuguese music. The written responses were randomized in sets of statements given to twelve teacher-musicians for hierarchical sorting (Silva, 1998). The results of the study showed that "A Kendall Coefficient of Concordance gives a W of 0.91 and a significance level of $p<0.0001$. A good indication of the consensus is the order of the sum of the ranks. This perfectly matches the predicted hierarchical order (Swanwick, 1999, p.84). Silva's Audience-Listening criteria were powerful in revealing students understanding of music.

In short, the eight levels of Silva's Audience- Listening Criteria are in a hierarchical and cumulative order. The first two levels are concerned with Materials, the third and fourth with Expression, the fifth and sixth with Form, and the last two levels with Value.

The first and second levels assess a student's responses to the materials or the physical elements of the music, such as sound quality and effect and the speed of the music. The third and the fourth levels assess the student's awareness of the relationship between sound and expression. Is the student aware that sound quality, rhythm, metric organization, specific rhythmic features and so on affect the expressiveness of a piece of music? The fifth and sixth levels assess perception and comprehension of the musical form, clear structural relationships and stylistic context. In the last two levels, students are expected to state how musical materials are manipulated musically, structurally and technically for specific musical features.

In analysing students' written responses, the eight levels of the Audience-Listening Criteria were combined into four for use. They were 'Materials' for Levels 1 and 2, 'Expression' for Levels 3 and 4, 'Form' for Levels 5 and 6, and 'Value' for Levels 7 and 8. Student helpers gave a final level to the musical understanding of every piece of written work. If the student helpers did not agree on the level, the researcher made the final

decision. A value of 1 indicated 'Materials, 2 indicated 'Expression, 3 indicated 'Form' and 4 indicated 'Value', representing the level of musical understanding that students had attained. After that, I used the Friedman Test, a non-parametric test for ordinal scales to statistically analyse the results.

In processing students' attitude towards the Luogudianzi, data of the attitude inventory was converted into numerical form. For strongly disagree, disagree, agree, quite agree and strongly agree, each position was given 1 to 5 marks respectively. An ANOVA with repeated measures was used to determine whether there was a change in the students' attitudes towards the Luogudianzi used in Beijing opera under the considerations of (a) Treatments of variable 'teaching sequence': Treatment 1 (information after music experience); Treatment 2 (information before music experience), (b) teacher who taught the lessons: the researcher; the regular teacher at LKS School, and (c) time: after treatments. I compared the mean score for the attitude scores collected in the questionnaire.

I trained the student helpers to process the data. In the training, I studied and discussed the audience-listening criteria with the student helpers thoroughly. Then, I gave each of them an identical set of ten questionnaires to analyse individually. Each student helper reported on the level that they had ranked the written responses according to the Audience-Listening criteria. We then discussed and compared the written responses of the students so that student helpers were consistent in giving the level of musical understanding.

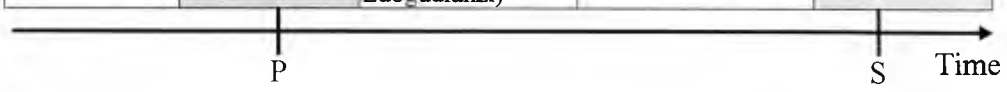
3.3.2 The design for Experiment 2 testing hypothesis 2: Proportion of teaching time devoted to giving information and to providing musical experience

The design of the Experiment for testing Hypothesis 2 for Experiment 2 was similar to that for Experiment 1. It is summarised in figure 3-5 below.

Figure 3-5: The design of the experiment for testing Hypothesis 2, Experiment 2.

Figure 3-5: The design of the experiment for testing Hypothesis 2, Experiment 2.

Experimental Group	Complete Questionnaire	Treatment	Continuation of Treatment	Complete Questionnaire
Teacher a, Class A, n=40		Teaching 1 (Treatment 1: More time experiencing Luogudianzi and less information)	Further Teaching 1 (Treatment 1: More time experiencing Luogudianzi and less information)	
Teacher b, Class B, n=42				
Teacher a, Class C, n=40		Teaching 2 (Treatment 2: More information and less time experiencing Luogudianzi)	Further Teaching 2 (Treatment 2: More information and less time experiencing Luogudianzi)	
Teacher b, Class D, n=42				



Key
Teaching 1: a unit of three lessons, entitled "Chinese non-melodic percussion instruments and Beijing opera Luogudianzi", using Treatment One.
Teaching 2: Same unit used in Treatment One
P: Asked students to complete the questionnaire
S: Asked students to complete the questionnaire

However, after I had conducted Experiment 1, I improved the design for Experiment 2. Changes included: (a) the choice of schools and class level of students, (b) the teaching approaches for Experiment 2, (c) audio-visual materials of Luogudianzi, (d) the number of data collected, (f) the music used for the tests for Experiment 2, and (g) questionnaire used for Experiment 2. I explain the details in the following.

Change of School and class level

I changed LKS School to LTP School for Experiment 2 because I found the regular teacher had difficulties in allowing me to continue the rest of the experiments there. Therefore, I used LTP School for Experiments 2, 3 and 4.

LTP School had similar background of LKS School. Both are well-established government aided secondary schools located in a public housing estate in the northern part of New Territories of Hong Kong. The two schools support the promotion of music in schools. Both have many extra-curricula music activities for students to join. Students of the two

schools have similar social and economic status. Most parents are working class people. These similar social, economic and music backgrounds helped to minimize any differences between the two schools.

In the new school, I needed to continue having the regular teacher teach one of the treatment groups, but the regular music teacher of LTP taught only Secondary-1 students. So I changed to Secondary-1 students for Experiments 2, 3 and 4.

Change of teaching approaches

To test Hypothesis 2, I changed the time devoted to experiencing Luogudianzi and information of music. Treatment 1 began with providing more musical experiences of Luogudianzi to students. Because I had received complaints about noise from teachers of LKS School when students were playing and composing Luogudianzi in Experiment 1, I changed the lesson so that students in Experiment 2 listened to the extracts and watched the video clips of Luogudianzi. However, I did not rule out the activities of playing and composing Luogudianzi. In view of the lesson I learnt in Experiment 1, I put less emphasis on music activities. Instead, I allocated more time for students to experience how the Luogudianzi depicted, embellished and intensified emotional changes of the characters in Beijing opera, by showing them more audio-video illustrations so that there could be less complaints of noise from LTP School teachers.

Students listened to and watched the video clips before any explanation. They noted down their feelings and observations on listening charts (see Appendix B & C). After that, I discussed and explained what was happening in the Luogudianzi with the materials that the students had just listened to and watched. I also provided students with information on Luogudianzi, but the amount of Information of Luogudianzi was less than in Treatment 1.

Treatment 2 began first with my telling students about the information of Luogudianzi through the CD-ROMS and playing some of the Luogudianzi. I explained in detail how Luogudianzi depicted, embellished

and intensified artists' emotional changes musically using the same video illustrations I used in Treatment 1, so that I had more time telling students about the information of Luogudianzi. In consequence, students of Treatment 2 had more time and a larger amount of information on Luogudianzi, but less time spent on musical experience.

The teaching topics covered in the two teaching approaches for Experiment 2 are shown below.

Figure 3-6: Teaching Topics of Luogudianzi of Treatment One and Two for Experiment 2

Teaching Content for Treatment One	Teaching Content for Treatment Two
Instruments of the Beijing opera Musical origins , Paizi and Beijing opera music The Functions of Luogudianzi in Beijing opera, and The Basic Musical Structure of Luogudianzi: one beat and two beats, from two beats to four beats, three beats.	Instruments of the Beijing opera Musical origins , Paizi and Beijing opera music The Names of the different types' of Luogudianzi2 The Categorization of Luogudianzi3 The Functions of Luogudianzi in Beijing opera, Musical notation of Luogudianzi in Beijing opera, and The Basic Musical Structure of Luogudianzi: one beat and two beats, from two beats to four beats, three beats.

Figure 3-7 below shows a summary of the teaching approaches for Experiment 2.

Figure 3-7: A summary of the teaching approaches for experiment 2.

Hypothesis testing 2	Treatment One: More time experiencing Luogudianzi and less information	Treatment Two: More information and less time experiencing Luogudianzi
Lesson 1	**1. Students completed the questionnaire** 2. I replicated the activities of experiencing the sounds of the instruments of Treatment 1 for Experiment 1 in lesson one and the first half of lesson two.	**1. Students completed the questionnaire** 2. I replicated the activities of introducing the instrument of Beijing opera of Treatment 2 for Experiment 1. 3. I asked student to beat a *bo* loudly for a festive atmosphere and a *daluo* heavily for a flamboyant figure to experience the difference of the sounds. 4. I introduced the musical origins of the Luogudianzi of Beijing opera.

[2] New topics for Experiment 2, Treatment 2. Details found in Appendix M
[3] New topics for Experiment 2, Treatment 2. Details found in Appendix M

Hypothesis testing 2	Treatment One: More time experiencing Luogudianzi and less information	Treatment Two: More information and less time experiencing Luogudianzi
Lesson 2	3. I demonstrated how to play the instruments with the "beater" of the *xiaoluo* and *bangu*. Students repeated after me. 4. I gave more time to students to appreciate how Luogudianzi embellished, highlighted emotional changes of the characters in Beijing opera by asking students : (a) Listening to extracts of Luogudianzi taken from video clip (Appendix P: Audi Visual Clip 2) three times. Students noted down their feelings on the listening chart (Appendix B). Students shared their observations. Then, I explained what was happening about the Luogudianzi with the video illustrations (Appendix P: Audi Visual Clip 2)	3.1 I introduced the names and categorization of Luogudianzi. 3.2 I introduced the functions of Luogudianzi with video illustrations. I also showed the basic music structure of Luogudianzi with these video illustrations. They were videos showing Luogudianzi (a) to accompany a series of stylised miming Qiba (起霸) (Appendix T: Audio Visual Clip 5), (b) to depict fighting scene(Appendix U: Audio Visual Clip 6); (c) to show a shock and the Luogudianzi with one beat structure (Appendix V: Audio Visual Clip 7); (f) to show disturbed feelings and Luogudianzi with two-beat structure (Appendix W: Audio Visual Clip 8); (f) to show three-beat structure (Appendix X: Audio Visual Clip 9) and (g) to show firm ,stately walk and four-beat structure (Appendix Y: Audio Visual Clip 10). 4.2. I explained the notation method for Luogudianzi and the mnemonics with the example of Luogudianzi, *Chongtou*.
Lesson 3	(b) watching Luogudianzi video illustrations to show (i) a shock and the Luogudianzi with one beat structure (Appendix V: Audio Visual Clip 7) (ii) disturbed feelings and Luogudianzi with two-beat structure (Appendix W: Audio Visual Clip 8); (iii) to show three-beat structure (Appendix X: Audio Visual Clip 9) and (iv) show firm, stately walk and four-beat structure (Appendix Y: Audio Visual Clip 10). Students noted down their observations on listening charts (Appendix C) for discussions and sharing in pairs. 4.3 I explained how the Luogudianzi highlighted emotional changes of the characters and the musical structure of Luogudianzi with the video illustrations that they had watched. I concluded the lesson with the function of Luogudianzi with two more video illustrations (Appendix R: Audio Visual Clip 4 & Appendix Q: Audio Visual Clip 3). **5. Students completed the questionnaire at the end of the third lesson**	5. I continued notation method of Luogudianzi with an example of a *Chongtou* 5.2 Some students played and cited the mnemonics of *Chongtou* Luogudianzi under my guidance. **6. Students completed the questionnaire at the end of the third lesson**

Materials of Luogudianzi for Experiment 2

I showed students some typical Luogudianzi such as *Sibianyiji* (西邊一擊 indicating a great shock; *Chongtou* (冲頭), which has a similar function to *Jijifeng* (急急風) in conveying rising emotion or creating a dramatic atmosphere; *Matui* (馬腿) and *Niusi* (紐絲), which convey a relatively relaxed mood by telling the story of *Kongchenji* (The trick of the empty city 空城計), with extracts taken from the video tape *Kongchenji*, a Beijing opera, so that students appreciated what was happening in the Luogudianzi. Video clips extracted from *Kongchenji* illustrating emotional changes were as follows:

1. A shock for the minister *Kong Ming* (孔明), when he finds out that a junior general, *Ma Zhi* (馬謖), has upset his armed forces strategy. The one-beat structure Luogudianzi *Yiluo* (k or c)[4], emphasizes the dramatic contrasts in the changing emotions of *Kong Ming* (Appendix V: Audio Visual Clip 7);

2. The two-beat structure, Chongtou, paints the disturbed feelings and worries of Kong Ming in view of the coming big fight with Sima Yi, who had only a small number of old and weak soldiers (Appendix W: Audio Visual Clip 8) ;

3. The three-beat structure Luogudianzi (Appendix X: Audio Visual Clip 9); and

4. The four-beat structure, describing the firm and stately walk of the great general *Sima Yi* (司馬懿) , using the *bo,* and the relaxed walk of *Kong Ming* , played on the *xiaoluo* (Appendix Y: Audio Visual Clip 10*)*.

Data collection

It became a concern that students may have completed too many questionnaires in the collecting of data of students' attitude towards and musical understanding of the Luogudianzi in Experiment 1, and so I had only asked students to complete the questionnaires twice in Experiment 2 after the teaching.

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[4] *YiLuo* performed with the *Daluo*, ***k***, suggests something exciting, whereas when it is played with the *Xiaoluo*, ***c***, it suggests something gentle.

Music used in Experiment 2 to test Hypothesis 2

According to Lu ((Lu, 1991) the form and structure of the Luogudianzi were made up by combinations and repetitions of the different types of Luogudianzi. The test music for Experiment 1, *Jijifeng* and the *water sound* were two separate Luogudianzi. There were no combinations of other Luogudianzi excerpts. Test music for Experiment 1 did not show fully the form and structure of Luogudianzi though the two Luogudianzi were sufficiently contrasting, with distinct mood, rhythm and tempo differences. I therefore changed the test music for Experiment 2 to a series of four Luogudianzi: the one-beat *Sibian yij*(撕邊一擊), the two-beat *Chongtou*(沖頭), the three-beat *Niusi*(紐絲) and the four-beat *Jijifeng*(急急風). They contrasted enough with one another to show the variety of changes of meter, tempo, mood, and free combination and repetition of Luogudianzi. Each Luogudianzi episode lasted around ten to twenty seconds, making a series one minute and thirty seconds in length. Test music for Experiment 2 is in Appendix S (ii): Test Music for Experiment 2.

Questionnaire used for Experiment 2

Because students of Experiment 1 had provided sketchy responses to written responses about what was happening in the music, I modified the questionnaire for Experiment 2. It seemed that they were not used to written responses to music. I therefore provided specific musical element options, such as rhythm, tempo, dynamics and form, for students to indicate which musical elements captured their interest most. I asked them to write how these musical elements influenced them while they were listening. For the attitude inventory, I found the rating scale of 'strongly disagree', 'disagree', 'agree', and 'strongly agree' providing sufficient options for students to indicate their musical preferences. I therefore cancelled the option of 'quite agree'. I used a Four-point Likert scale to do the coding of the attitude inventory with a value of 1 for 'strongly disagree', 2 for 'disagree', 3 for 'agree' and 4 'strongly agree' for the questionnaire for experiment 2. Questionnaire for Experiment 2 is shown in Appendix E.

3.3.3 The design for Experiment testing Hypothesis 3: The level of students' control over music activities or 'framing'

The design of the experiment for testing Hypothesis 3 for Experiment 3 was similar to that for Experiment 2. It is summarized in Figure 3-8 below.

Figure 3-8: The design of the experiment for testing Hypothesis 3

Experimental Group	Complete Questionnaire	Treatment	Continuation of Treatment	Complete Questionnaire
Teacher a, Class A, n=43		Unit 1: Treatment 1 (more students' control over music activities)	Unit 1: Treatment 1 (more students' control over music activities)	
Teacher b, Class B, n=43				
Teacher a, Class C, n=42		Unit 1: Treatment 2 (less students' control over music activities)	Unit 1: Treatment 2 (less students' control over music activities)	
Teacher b, Class D, n=43				

Key
Teaching 1: a unit of six lessons, entitled "Chinese non-melodic percussion instruments and Beijing opera Luogudianzi", using Treatment One.
Teaching 2: Same unit used in Treatment One
P: Asked students to complete the questionnaire
S: Asked students to complete the questionnaire

However, after I had conducted Experiment 2, I made changes to improve the design for Experiment 3. These included (a) teaching approaches, (b) teaching materials, and (c) questionnaire used for Experiment 3.

Number of lessons

I increased the number of lessons to six for Experiment 3 so that students had more time for practical music activities such as playing and composing Luogudianzi. I took eight hundred and ninety minutes, that is, two six-day cycles and 4 days to complete the experiment. There was an average of 37.1 minutes for each lesson.

Teaching approaches

To test Hypothesis 3, I changed the degree of student autonomy allowed in music activities experiencing Luogudianzi. Treatment 1 began with students incorporating the *Sibainyiji, Chongtou, Matui* or *Niusi* that they had learnt into the new one they composed, to accompany the scenario they had planned. Treatment Two began with students playing Luogudianzi *Sibianyiji, Chongtou, Matui* or *Niusi*. They had to play the Luogudianzi according to the particular musical characteristics of that Luogudianzi: for example, the dynamics contrasts and rhythmic patterns of *Chongtou* (沖頭) and *Matui* (馬腿), and the special atmospheres that *Chongtou* (沖頭) produced. They composed Luogudianzi by combining, repeating and rearranging the order of the four Luogudianzi.

Details of the six lessons of the two treatment groups can be seen in Appendix Z.

Materials used for Experiment 3

I extracted another video illustration from *Sanchakou* (At the road junction 三叉口) to show students how the Luogudianzi highlighted sudden changes of emotion and also a typical miming of two heroes fighting in a small dark room (Appendix Z1: Audio Visual Clip 11).

Questionnaire used for Experiment 3

Because students of Experiment 2 had provided sketchy written responses, I modified the questionnaire for Experiment 3. It was likely that students were not used to written responses to music. I therefore deleted open questions about Luogudianzi. Instead, I asked students to show their musical understanding of Luogudianzi by describing it in detail, pretending they were describing the music to a deaf person.

I also used nine pairs of bipolar adjectives of Semantic Differential Scales for students to indicate their attitudes towards Luogudianzi, and their musical perception, in order to reveal their musical understanding of it. These pairs of bipolar adjectives offered a broad description of the students'

musical perception of the Luogudianzi. One of these pairs 'like/dislike' indicated students' musical attitude towards the Luogudianzi. The remaining eight pairs of adjectives 'thick/thin', 'small/large', 'dark/bright', 'animated/lifeless', 'varied/all the same', 'simple/complex', 'valuable/worthless' and 'interesting/boring', revealed how students perceived the Luogudianzi. The questionnaire for Experiment 3 is in Appendix F.

3.3.4 The design for Experiment 4 testing Hypothesis 4: Repeated listening

Experiment 4 had a separate design. It was based on Swanwick (1994), who demonstrated students' musical perception changed under repeated exposure by listening to the music three times at weekly intervals.

Experiment 4 involved five classes of Secondary-1 students from LTP School taking part in a repeated listening to the series of Luogudianzi selected for the experiment. There were one hundred and ninety-three students in the experiment. The students listened to a series of Luogudianzi (Appendix S (iii): Test Music for Experiment 4) three times at weekly intervals. The students gave their responses to the test music by completing the questionnaire three times, after every exposure.

The following Figure 3-9 presented an outline of the design for Experiment 4.

Figure 3-9: The design of the Experiment for testing Hypothesis 4: Repeated listening

Treatment	
Listening to test music at weekly interval with no instruction, no classroom activities and no information on Beijing opera Luogudianzi	
5 classes of secondary-1 students in a number of one hundred and ninety-three	1st exposure to Luogudianzi
5 classes of secondary 1 students in a number of one hundred and ninety-three	2nd exposure to Luogudianzi
5 classes of secondary 1 students in a number of one hundred and ninety-three	3rd exposure to Luogudianzi

Teaching approaches

No teaching was required in Experiment 4.

Music used for Experiment 4

I changed the test music for Experiment 4 to a series of Luogudianzi of *Xiaoluo Jinqianhua Lingyiti* (小鑼金錢花另一體), *Shibazhi* (十八子), *Baolaocui*(鮑老催) and *Ganweisheng* (干尾聲). *Xiaoluo Jinqianhua Lingyiti* (小鑼金錢花另一體) It is in triple time with a steady rhythm, played by the *gu*, *xiaoluo*, *bo* and *daluo*. This usually goes with a bigger crowd of people on stage, and brings out a grand atmosphere. The second Luogudianzi *Shibazhi* (十八子),) is also known as *Shibagi* (十八擊). It is played by the *gu, ban* and *xiaoluo* in duple time. The *xiaoluo* is supposed to be the leading instrument in this Luogudianzi, played in a light-hearted manner. *Baolaocui*(鮑老催) is a typical solemn Luogudianzi with a singing tune. It has a similar rhythmic structure to *Didijin* (滴滴金). *Ganweisheng* (干尾聲) is a short Luogudianzi played on the *gu*, *ban*, *xiaoluo*, *bo* and *daluo*, and depicts people walking hastily. The series of Luogudianzi were contrasting in rhythm, meter and dynamics. The duration of each Luogudianzi ranged from 35 seconds to 55 seconds, making an average of 23.75 second each. I grouped these four Luogudianzi together as a series with short intervals between them. Test music for Experiment 4 is in Appendix S (iii): Test Music for Experiment 4.

Questionnaire for Experiment 4

I deleted free writing for students' musical understanding of Luogudianzi because students did not write much about the music for the questionnaire for Experiment 3. I asked students' about their attitudes to and musical perception of Luogudianzi using open questions for Experiment 4. Open questions on attitudes towards and the musical perception of the music are listed in Figure 3-10 below.

Figure 3-10. Open questions set on the questionnaire for Experiment 4

	Open Questions
Attitudes towards the music excerpt	How much do you like this group of musical excerpts? How often do you listen to this kind of music? Would you buy this kind of CD?
Musical perception of the music excerpts	How do you feel about this group of music excerpts?

I changed some pairs of bipolar adjectives for students to indicate their attitudes towards and the musical perception of Luogudianzi. This included 'dislike very much/like very much', 'uninteresting/interesting', 'would not buy/would buy', and 'daily/twice a week/weekly/possibly/yearly/seldom/never' for attitudes. Other pairs of adjectives for musical perception included small/large, varied/all the same, simple/complex and valuable/worthless. The questionnaire for Experiment 4 is included in Appendix G.

Data analysis of Experiment 4

In processing the data, four student helpers each coded all the questionnaire items once. A value of 1 to 7 was given to the pairs of adjectives. The pairs of adjectives were reversed with the 'positive' ends being accorded the large number on the 7-point scale. A t-test was used to analyze the data of students' attitudes to and musical perception of Luogudianzi. The data analysis of Experiment 4 included (1) Students' attitudes to and musical perception of Luogudianzi and (2) Students' attitudes to and musical perception of Luogudianzi for students who scored 4 or below after Exposure 1 (to see if they were able to offer a more emphatic rating on attitudes to and musical perception of Luogudianzi, after Exposure 2).

For (1) Students' attitudes to and musical perception of Luogudianzi, a t-test was used to compare (a) three sets of scores: 1) the attitude scores for Exposure 1 and Exposure 2, 2) the attitude scores for Exposure 2 and Exposure 3, and 3) the attitude scores for Exposure 1 and Exposure 3; and (b) three sets of scores: 1) the perception scores for Exposure 1 and Exposure 2, 2) the perception scores for Exposure 2 and Exposure 3, and 3) the perception scores for Exposure 1 and Exposure 3, for the five pairs of adjective items of questionnaire Item 2, that tested students' musical perception of Luogudianzi.

For (2) Students' attitudes to and musical perception of Luogudianzi for students who scored 4 or below after Exposure 1 (to see if they were able to offer a more emphatic rating on attitudes to and musical perception

of Luogudianzi, after Exposure 2), a t-test was used (a) to compare three sets of scores: 1) the attitude scores for Exposure 1 and Exposure 2, 2) the attitude scores for Exposure 2 and Exposure 3, and 3) the attitude scores for Exposure 1 and Exposure 3, for students who scored 4 or below after Exposure 1, and (b) to compare three sets of scores: 1) the perception scores for Exposure 1 and Exposure 2, 2) the perception scores for Exposure 2 and Exposure 3, and 3) the perception scores for Exposure 1 and Exposure 3, for the five pairs of adjective items of questionnaire Item 2, that tested students' musical perception of Luogudianzi, for students who scored 4 or below after Exposure1.

3.4 Part II: Interviews to follow up the Experiments

To follow up Experiment 1, 2 and 3, I conducted semi-structured interviews with the students and the regular teacher of LKS School and LTP School.

3.4.1 Number of students involved in the student interviews

The number of students involved in the interviews for the three experiments was different. I increased the number of students for the interviews and changed to group interviews for Experiment 2 and 3, as I found students were reluctant to speak up. I had student helpers to help interview students for Experiment 1, but I carried out the group interviews for Experiment 2 and 3 because of the constraints of my budget. A summary of the numbers of students involved and interviews taken for Experiment 1, 2 and 3 is listed in Figure 3-11 below.

Figure 3-11: A summary of student interviews for Experiment 1, 2 and 3.

Experiment	Interview	Number of students involved	Number of interview taken	Time used in each interview
1	Individual interview	20 (5 students from each class of each treatment group)	20 individual interviews	About 15 minutes for each individual interview
2	Group interview	16 (4 students from each class of each treatment group)	4 group interviews, 2 for each treatment group	About 20 for each group minutes
3	Group interview	20 (7 and eight students from each class of each treatment group)	4 group interviews, 2 for each treatment group	About 15 for each group minutes

3.4.2 Interview questions for the follow up to the experiments

According to Foddy (Foddy, 1993) and Cohen (Cohen, 1994), threatening questions concerning normative issues could result in failure to obtain information from the interviewees. I therefore set up two sets of open-ended interview questions in Chinese for the students and the regular teacher in a friendly tone so that I could ensure good rapport with the interviewees.

1. Interview questions for students about the experiences of Luogudianzi they had in the two teaching approaches.

What do you think about the activities in the four music lessons?

Which activities did you like most?

Why did you like that activity most?

Which teaching approach do you think was the most interesting in the lessons?

Which activity (ies) helped you learn the Luogudianzi more effectively?

After these lessons, what impression and feelings do you have about the Luogudianzi of Beijing opera?

2. Interview questions for the regular teacher about

(a) What they thought about the teaching approaches

What did you observe in the students behaviour in the two teaching approaches?

What did you find about the two teaching approaches?

Which of teaching strategies did you think was most influential in changing the students' attitudes towards traditional Chinese music and enhancing their understanding of the music?

Did you observe any difference in attitude to learning between the two treatment groups?

(b) Any extraneous factor affecting the development of teaching strategies of bringing about personal knowledge of traditional music, Luogudianzi.

Which approach are you more competent to master?

3.4.3 Interview training

Before the semi-structured interviews with the students, there was a training session for the student helpers. I chose four final-year student-teachers of music to conduct semi-structured student interviews with me. They were familiar with music teaching scenarios: for example, issues of classroom management and wording that the students used to describe teaching and learning in classroom. They were likely to help the students tell about what they had experienced in the teaching approaches.

In the training, I went through the interview questions with the four student-teacher interviewers. I reminded them to explain the purpose of the interview and the use of recording machines at the beginning of the interview. I conducted mock interviews with the students.

3.4.4 Analyzing interview data

I transcribed and translated the data collected from the interviews from Cantonese into English. I sorted and categorized the transcriptions for further analysis in accordance with the three set questions.

In this chapter we have described the designs of the four experiments used to test the four hypotheses of the study and the organisation of the subsequent investigation into the students' and teachers' experience of Luogudianzi under different teaching approaches. The extent to which these research strategies were able to illuminate the students' personal knowledge of music will be considered in the following chapters.

Chapter 4

Findings

Introduction

This chapter presents the findings from the four experiments and from the follow-up for every experiment.

Data on students' attitudes towards and the musical understanding of Luogudianzi came from questionnaires. Responses on attitude and musical understanding revealed students' personal knowledge of Luogudianzi. Interview data from students and regular teacher collected in the follow-up to the four experiments revealed (a) what the students thought about their experience of the different teaching approaches to presenting Luogudianzi, and (b) what the teacher thought about the teaching approaches and (c) any extraneous factors affecting the development of teaching strategies to bring about students' personal knowledge of music.

The experiments tested the following four hypotheses:

1. Hypotheses for Experiment 1: (Teaching sequence)
   (a) Music experience and music information provided in different sequences will have a different effect on students' attitudes towards traditional Chinese music,
   (b) Music experience and music information provided in different sequences will have a different effect on students' understanding of traditional Chinese music.

2. Hypotheses for Experiment 2: (Proportion of teaching time devoted to giving information and to providing musical experience)
   (a) Teaching music using different proportions of information and direct experience will have a different effect on students' attitudes towards traditional Chinese music
   (b) Teaching music using different proportions of information and

direct experience will have a different effect on students' understanding of that music.

3. Hypotheses for Experiment 3: (Students' control over music activities or 'framing')
   (a) The level of instructional framing, that is the degree of student autonomy allowed in music activities, will affect students' attitudes towards traditional Chinese music
   (b) The level of instructional framing, that is the degree of student autonomy allowed in music activities, will affect students' understanding of that music
   (c) The level of instructional framing, that is the degree of student autonomy allowed in music activities, will affect students' perception of that music

4. Hypotheses for Experiment 4: (Repeated rather than one-off listening)
   (a) Repeated listening will affect students' attitudes towards traditional Chinese music
   (b) Repeated listening will affect students' musical perception of that music

The chapter is organized so that questionnaire data from each experiment are presented first and then data from interviews with teachers and students are presented second. So I present the questionnaire data from Experiment 1 and indicate whether or not the data support the hypothesis tested in the experiment. Then in the second part I report the data from the follow-up interviews with teachers and students of Experiment 1. After the report of Experiment 1, I report Experiment 2 and 3 in turn. There will be no follow up to Experiment 4 as there was repeated listening only. There was neither teaching of Luogudianzi nor music activities in Experiment 4. The questions asked in Experiment 1, 2 and 3 were not relevant to experiment 4.

The findings of the four experiments are summarized at the end of the chapter. Discussion of the findings, as well as implications and

conclusions are left to the final chapter.

4.1 Experiment 1

The hypotheses tested in Experiment 1 (teaching sequence) were:

Music experience and music information provided in different sequences will have a different effect on students' attitudes towards traditional Chinese music,

Music experience and music information provided in different sequences will have a different effect on students' musical understanding of that music

So data from the questionnaires administered after Treatment 1 (information after music experience) and after Treatment 2 (Information before music experience) were compared to see if there was support for the hypothesis.

The comparison of questionnaire responses for the two treatments groups gave the following finding:

4.1.1 Attitudes to the Luogudianzi

In Experiment 1, the Repeated Measure 3-way ANOVA was used to determine whether responses to the questionnaires were significantly different for the two treatments after the teaching. The mean values of the Treatment Group 1, those who had information after experiencing music, and Treatment Group 2, those who had information before experiencing music are shown in Figure 4-1 below.

Figure 4-1: Mean values of students' attitude towards the Luogudianzi under different teaching sequence.

	Before treatment mean	During treatment mean	After treatment mean	Number of students	
Treatment 1	1.9531	2.1091	2.1040	75	F=1.272, NS
Treatment 2	2.0761	2.0674	2.2172	67	

There was no significant difference between students' responses to the attitude items for Treatment 1 and students' responses to the attitude items for Treatment 2. The p-value was not significant ($p>0.05$). This shows that different teaching sequences did not bring about different attitudes to Luogudianzi.

4.1.2 Understanding of Luogudianzi

While differences between Treatment 1 and Treatment 2 responses to attitude items in the questionnaire were not significant, there were significant differences between Treatment 1 and Treatment 2 responses to the two questionnaire items that tested students' musical understanding of Luogudianzi.

Questionnaire item 1.2 'When I hear the music, I want to continue listening because ...'

The Friedman test showed a significant difference between Treatment 1 and Treatment 2. Figure 4.2 below shows that the probability of the difference being due to chance was less than 9 in 1000 (<.009). See Figure 4-2.

Figure 4-2: Differences in students' musical understanding as shown in questionnaire item 1.2: 'When I hear the music, I want to continue listening because...', using different teaching sequence.

Friedman Test

Ranks

	Mean Rank
PRE1.2	2.12
MID1.2	2.02
POI.2	1.86

Test Statistics[a]

N	140
Chi-Square	9.317
df	2
Asymp. Sig.	.009

a. Friedman Test

The mean scores for Questionnaire Item 1.2 (music understanding) for Treatment 1 (information after music experience) were significantly different (p-value <0.005) from those for Treatment 2 (information before music experience). See Figure 4-3 below.

Figure 4-3: Difference of mean values of students' musical understanding before, during and after each of the two treatments (different teaching sequence).

Treatment One

Friedman Test

Ranks[a]

	Mean Rank
PRE1.2	2.16
MID1.2	2.05
POI.2	1.79

a. METHOD = A

Test Statistics[a, b]

N	75
Chi-Square	10.434
df	2
Asymp. Sig.	.005

a. Friedman Test

b. METHOD = A

Treatment Two

Friedman Test

Ranks[a]

	Mean Rank
PRE1.2	2.08
MID1.2	1.98
POI.2	1.94

a. METHOD = B

Test Statistics[a, b]

N	65
Chi-Square	1.217
df	2
Asymp. Sig.	.544

a. Friedman Test

b. METHOD = B

There was a lower mean score in Treatment 1 after the treatment. However, neither group of students scored high after its treatment. See Figure-4-3. Students of both treatment groups noticed sound quality, sound effects and the different speeds, or 'material' of the music.

Questionnaire item 2a.2"What came into your mind when you heard the first music excerpt? What made you have such associations?"

For questionnaire Item 2a.2, the Friedman test showed a significant difference in students' musical understanding of *JiJiFeng* between Treatment 1 and Treatment 2. Figure 4.4, below shows the probability of the difference being due to chance was less than 5 in 1000 ($p < .005$).

Figure 4-4: Significant difference in students'musical understanding of Luogudianzi, *JiJiFeng* between the two groups of students using different teaching sequences.

Friedman Test

Ranks

	Mean Rank
PRE2A.2	2.12
MID2A.2	2.03
POS2A.2	1.85

Test Statistics[a]

N	118
Chi-Square	10.458
df	2
Asymp. Sig.	.005

a. Friedman Test

The mean scores for the responses to questionnaire Item 2a.2 (music understanding) for Treatment 1 were significantly different (p-value <0.001) from those for Treatment 2. See Figure 4-5 below.

Figure 4-5: Questionnaire item 2a.2. Mean value of students' musical understanding of the first music.

Treatment One

Friedman Test

Ranks[a]

	Mean Rank
PRE2A.2	2.11
MID2A.2	2.13
POS2A.2	1.76

a. METHOD = A

Test Statistics[a, b]

N	67
Chi-Square	13.034
df	2
Asymp. Sig.	.001

a. Friedman Test

b. METHOD = A

Treatment Two

Friedman Test

Ranks[a]

	Mean Rank
PRE2A.2	2.14
MID2A.2	1.89
POS2A.2	1.97

a. METHOD = B

Test Statistics[a, b]

N	51
Chi-Square	3.928
df	2
Asymp. Sig.	.140

a. Friedman Test

b. METHOD = B

There was a lower score in Treatment 1 after the treatment. However, neither group of students scored high after its treatment. Students of both treatment groups attended mainly to the sound qualities of the music, such

as sound effects and the different speeds of the music, what Swanwick calls 'materials' rather than expressive shaping.

The findings show that the musical understanding items showed a significant difference between Treatment 1 and Treatment 2, but the attitude items showed no significant difference between Treatment 1 and Treatment 2. Therefore hypothesis (b) that music experience and music information provided in different sequences will have a different effect on students' musical understanding is accepted while hypothesis (a) that music experience and music information provided in different sequences will have a different effect on students' attitudes towards traditional Chinese music is rejected. It is clear that the variable being tested in Experiment 1 did not have a different effect on both attitude towards and musical understanding of Luogudianzi, and therefore the experiment offers only partial support for the view that the variable teaching sequence will have a different effect on personal knowledge of music.

4.2 Experiment 1 follow-up

Though the hypothesis for Experiment 1 was only partly supported, the interview data of the students and the teacher of Experiment 1 below revealed students' learning experience of the Luogudianzi, comments on the two teaching approaches, and factors that might affect the extent to which the teaching strategy can contribute to the acquisition of a personal knowledge of music.

I begin with students' experience of the two treatment groups, and then present the regular teacher's observation on students' behaviour in the two treatment groups and his comments about the teaching approaches.

The student interviews were conducted at LKS School, in five separate rooms, on the day after the fourth lesson of the experiment. Five students were chosen at random from each class of the two treatment groups making twenty interviewees. Each interview lasted about fifteen minutes.

A. Students' experiences in learning Luogudianzi under different teaching sequence

Students were asked about their attitudes and understanding of Luogudianzi, as well as the teaching strategies they had experienced.

Students' attitudes towards the Luogudianzi

Most students in each treatment group disliked the sounds produced by the four major instruments of Luogudianzi. They complained that the sounds were very loud and harsh

Did not like the sounds of the instruments

The students in Treatment 2 (classes 2B and 2E) made the following comments about the instruments:

> 2B-25: The sound of the instruments was not good. They were noisy and monotonous. The sounds were always the same. The gong is not good. It is noisy.
>
> 2B-41: I do not like Chinese musical instruments like these. There was no pitch (melody). It was very noisy. When we played a gong, it was very noisy.
>
> 2E-25: I prefer stringed instruments. I don't like this percussion instrument. It's noisy... I didn't like the feeling of beating (the way they played the instruments).
>
> 2E-33: It was not interesting. There are not many ways of beating the instruments. The methods of beating are all very similar.

One student in the Treatment 1 group said:

> 2D-42: I don't like them (these instruments). There is no melody. This caused confusion when playing.

Only one student out of ten in the Treatment 1 group showed interest in the instruments.

> 2C-26: The sound of the instruments is clear when you beat them. The sound and the appearance of the instruments are interesting. Different sounds were produced when you beat them in different places.

Found Luogudianzi interesting but did not like it much

The students in both treatment groups found Luogudianzi quite interesting. It was new to them. However, they commented that this kind of music was very noisy. Contrasting attitudes towards Luogudianzi were found among the students in both treatment groups. Some said it was interesting, that Luogudianzi was able to produce good sound effects, and that it had rhythm and pitch. However, some found it boring and annoying. The students in the Treatment 1 group responded as follows:

> 2D-28: I found out more about Luogudianzi when I learnt Jijifeng (急急風) ... We followed the rhythm when we played Jijifeng. I found it

interesting ... However, I do not like it much. I prefer music with tunes, and instruments that I can play in a song (with a melody).

2D-40: ... It (Luogudianzi) is mostly noisy, though it is sometimes quiet. It was quite good overall, but sometimes I think it is too noisy ... It has no pitch (melody) but it still produces a good sound effect. It has a good rhythm, too.

The students in the Treatment 2 group responded as follows:

2E-25: Luogudianzi is a kind of Chinese music, just like the music I have heard in Cantonese opera... It's quite noisy, annoying and boring. I do not like it very much.

2B-32: I don't know much about Luogudianzi...I found it boring. I am not interested in it.

2B-41: ... It is difficult to play. We have to listen to its rhythm. It was very interesting. However, I did not like this kind of music very much. It was very noisy, for example, the gong.

Student' musical understanding of the Luogudianzi

Luogudianzi is a kind of percussion music used in Chinese opera

The students in both treatment groups demonstrated factual knowledge of Luogudianzi, for example, that Luogudianzi is a type of Chinese percussion music or Luogudianzi goes with fighting. Students said Luogudianzi was similar to that used in Cantonese opera. They had come upon it on TV programmes, at special concerts at the school, or with family members. They did not know the proper term for this kind of music. After their four lessons, they knew the proper term for it. They knew it was used in Beijing opera as well.

A student in the Treatment 1 group said:

2C-32: Luogudianzi is the background music for Chinese opera. You know that when some actors appear, the music (Luogudianzi) will appear as well. The music goes along with fighting too... It is very impressive ... I am familiar with this music (Luogudianzi), but I don't know the names of all the different types.

Students' feedback on the teaching strategies of the two treatment groups

In the following I report the feedback on Treatment 1 and Treatment 2 in turn.

Treatment 1

Playing musical instruments was fun but it was noisy

Most of the interviewees (eight out of ten) in the Treatment 1 group thought the lessons were interesting and very enjoyable, as they got the chance to feel and experience the instruments directly. However, some said that the sounds produced by the instruments were too loud. It was so noisy that they could not stand it, especially when their classmates played the instruments in a disorderly fashion. As a result, playing the instruments in groups became very disturbing. One of them said:

> 2D-42: The four lessons were quite good. However, some of our classmates were naughty. They played the instruments and beat them loudly. It was very disturbing. The teacher tried to stop them, but they just played even more loudly. This interrupted the lesson a lot.

Free work is fun

The students in the Treatment 1 group enjoyed the sound exploration of the instruments most. They could play in whatever way they wished. They were proud to discover the special sound effects.

> 2C-06: I found the four lessons interesting. I enjoyed playing the instruments freely .... I could try out the instruments. I could examine the sounds. Playing Luogudianzi with other people (classmates) was quite good.

> 2C-26: ... I was happy that teacher asked us to try out the instruments ... I could examine the sound. The way we experienced *Jijifeng* in groups was impressive. We could experience the speed (the tempo), the volume (the dynamic contrast) of *Jijifeng* with the instruments.

Students in the Treatment 1 group welcomed the composing sessions. They shared their ideas and thoughts. They enjoyed the process of making up rhythmic pieces.

> 2D-28: ... I liked most were playing the instruments in groups and composing a song (rhythmic piece). We could think and play with our classmates ... I prefer composing with classmates (and composing) to playing instruments.

> 2D-40: I enjoyed exploring the sounds and composing rhythmic pieces, though we all played in a mess ... I was happy to play in my own way. Listening to the CD was not as impressive as playing the instruments freely.

Treatment 2

Lessons were boring except playing the instruments

By contrast, most of the students in the Treatment 2 group said that

they felt the lessons were boring, except when they were playing the instruments. They commented that too much time was spent on setting up equipment for the visual aids. One of them said:

> 2E-25: It was nice to play the instruments. It was fun. I don't often play these instruments... It took almost an hour to set up the equipment for the video clips. I was not interested in the information and the images on the CD-ROM. I did not find the Luogudianzi interesting.

Live demonstration was impressive

Students in the Treatment 2 group found it interesting to learn about the Chinese percussion instruments using the CD-_ROM and video clips. However, they found playing the instruments and the teacher's demonstration more impressive. They enjoyed these aspects most. It seems that different students have different attitudes and it may be that individual differences suggest that a range of learning experiences is desirable.

> 2B-41: ... it is more impressive to have the teacher's demonstration than the CD-ROM.
>
> 2B-32: The lessons were very boring but playing the percussion instruments was impressive. I learnt how to play the Chinese musical instruments
>
> 2E-33: Playing instruments is interesting. However, it was awful just sitting there and listening to the teacher. It was boring!.

B. Teacher's observation of the two teaching strategies

In the semi-structured informal interview, the regular teacher gave the followings comments on the two teaching strategies. I present the comments on Treatment 1 and Treatment 2 in turn.

Treatment 1

Encouraged active participation and sustained the students' attention

The regular teacher mentioned that Treatment 1 was more interesting. It made it possible to arouse and sustain the students' interest. The students were given space in which they could experiment with the instruments and the Luogudianzi in their own way. This helped them to discover aspects of Luogudianzi for themselves and to appreciate the instruments and Luogudianzi more than when they were introduced to the factual information. The students in the Treatment 2 group, however, were not free to explore. They had to follow the teacher's instruction. It was more likely that they would feel bored, as they had less chance to make decisions for themselves.

The Luogudianzi might not have made a big impression on them as a result. The retention and retrieving of information about the Luogudianzi might also have been affected.

> A: I think Method A (Treatment 1: information after music experience) is more interesting. The students were able to have personal direct experience of the music ... to discover the differences in the sounds and patterns of Luogudianzi ... When they know the proper way of playing, they are able to appreciate the music more deeply ...they would find out that there were pattern and structure in the music (Luogudianzi). There would be some special meaning in certain patterns.
>
> A: Method B (Treatment 2: information before music experience) was not that good. The students only listened to the teacher. They would get bored ... students forget information very easily ...There is no guarantee that what they perform (playing the instruments) is the outcome of what they have learnt (knowledge of performing skills required in Luogudianzi).

Treatment 2

Information prepared students for unfamiliar music genre

The regular teacher pointed out that students would accept a new genre of music more readily if information about the genre was given to them first. She used the example of the Luogudianzi in Beijing opera to explain her points of view. She argued that the Luogudianzi in Cantonese opera is similar to that used in Beijing opera. However, as the students were not familiar with Beijing opera, the Luogudianzi used in Beijing opera would be new to them. They might refuse to listen. Giving them information about Luogudianzi and Beijing opera helped to prepare them for this new genre. The teaching sequence used in Treatment 2 was a good example of this. Playing the instruments (i.e., playing the Luogudianzi with the instruments) after being given the information brought the students closer to this new musical genre.

Audio-visual aids captured and sustained the students' attention and interest but could not sustain for long

The regular teacher pointed that CD-ROMS and video clips were good information resources. They were useful and effective in capturing and sustaining the students' interest and attention. The teacher was able to repeat any specific part by replaying the CD-ROMs or video clips. However, the students could not sustain their interest for long after they had become familiar with the images on the CD-ROMS and video clips.

> A: The students seemed interested in watching the video... students

were able to identify *JiJiFeng* (急急風) from the audio-video clips. However, they would lose interest and stop paying attention when they became familiar with these audio-visual aids.

C. Extraneous factors that might affect the extent to which the teaching strategy can contribute to the acquisition of a personal knowledge of traditional Chinese music in Hong Kong secondary schools

The regular teacher suggested there could be other influential factors affecting the extent to which the teaching strategy could contribute to the acquisition of a personal knowledge:

Confidence in teaching materials was the crucial factor in the teaching approaches

The regular teacher said that she did not consider the choice of teaching approaches to be important in her teaching. However, she admitted that the teaching materials and the extent of a teacher's knowledge about the topics to be taught affected her teaching performance. She argued that if the teacher knows the teaching materials well, she can make the necessary adjustments to suit the students' needs. The teacher is able to adjust the sequence of content and the design of the activities.

A: For me, the two teaching approaches did not have that much influence on my teaching. If I know the topic well, any method is fine for me ...In fact, how well a teacher knows the subject is the most basic and important issue to be considered in teaching.

Considerations of classroom management turned out to be crucial

The teacher stated that classroom discipline was an important factor when considering which teaching approach to use. She would not commit herself to using any particular approach. It all depended on how well she could control the class.

A: I prefer Method B (Treatment 2: information before music experience) because it's easy to manage. Students may feel Method B was boring but what concerns me most is how I can have full control over them. It doesn't matter whether the students are well behaved or badly behaved ... the most important thing of all was that I felt confident to manage them.

The layout of the classroom constrained the choice of teaching approaches

The teacher said that the noise made by the students during Treatment 1 classes made her worry about complaints from colleagues. She dared not use the teaching sequence for Treatment 1 as it caused classroom management problems. In addition, she stated the layout of the classroom caused her numerous problems in organizing group work or using new equipment, such as the computer for the CD-ROMS. It took time to set it up.

> A: Colleagues do not expect you to allow students to make any noise during music lessons... they would think that you are incapable of controlling the class. ... The noise was very disturbing to them. Besides this, our classroom is small. It was very crowded when we did group work. It was so noisy. The students themselves were disturbed by the noise.

The statistical analysis shows, over the short period of time allocated to theses two approaches, changes in the sequence of teaching did not by themselves have a different effect on either students' attitudes towards or musical understanding of the Luogudianzi. However, the comments of students and teacher suggest more positive outcomes. For example, students of Treatment 1 (information after music experience) said that they were having fun and freedom in experiencing music. Students of Treatment 2 found playing musical instruments was fun, and said that the teacher's demonstrations were impressive. The regular teacher commented that Treatment 1 encouraged active class participation; Treatment 2 showed that information prepared students for an unfamiliar genre such as Luogudianzi.

4.3 Experiment 2

The hypotheses tested in Experiment 2 (Proportion of teaching time devoted to giving information and to providing musical experience) were:

Teaching music using different proportions of information and direct experience will have a different effect on students' attitudes towards traditional Chinese music

Teaching music using different proportions of information and direct experience will have a different effect on students' understanding of that music.

So I compared data from the questionnaires, administered after each treatment for Treatment 1 (more time devoted to providing musical experience than to giving information) with similar data for Treatment 2 (less time devoted to providing musical experience than to giving information) to see if there was support for the hypotheses.

The comparison of questionnaire responses for the two treatments groups gave the following findings:

4.3.1 Attitudes to the Luogudianzi

The Repeated Measure 3-way ANOVA was used to determine whether responses to the questionnaires were significantly different for the two treatments after the teaching. The mean values of the Treatment Group 1, (those who had more time for musical experience than for hearing information about Luogudianzi), and Treatment Group 2, (those who had less time for musical experience than for hearing information about Luogudianzi are shown in Figure 4-6.

Figure 4-6: Mean values of students' attitudes towards the Luogudianzi under different proportions of time for musical experience and information.

	Before treatment mean	After treatment mean	Number of students	
Treatment 1	2.4795	2.3607	73	F=10.341, p<0.02
Treatment 2	2.3974	2.5598	78	

There was a significant difference between students' responses to the attitude items for Treatment 1 and students' responses to the attitude items for Treatment 2 (p-value was $p<0.02$). The difference suggests that Treatment 2 (less time for musical experience than for hearing information about Luogudianzi) was better for helping students' attitudes as a higher mean score was observed after the treatment in Treatment 2. However, neither group scored high after the treatment; an indication that they did not really enjoy the activity under either of the treatments.

4.3.2 Understanding of Luogudianzi

The two questionnaire items that tested students' musical understanding of Luogudianzi also showed significant differences between Treatment 1 and Treatment 2.

Questionnaire item 1.a ('I am happy to listen to the piece of music. This is because ....)

The Friedman test showed a significant difference between Treatment 1 and Treatment 2. Figure 4-7 below shows that the probability of the difference being due to chance was less than 22 in 1000 (<.022).

Figure 4-7: Differences in students' musical understanding as shown in questionnaire item 1a: 'I am happy to listen to the piece of music. This is because ..., using different proportion of time..

Friedman Test

Ranks

	Mean Rank
P1A	1.56
P01A	1.44

Test Statistics [a]

N	151
Chi-Square	5.255
df	1
Asymp. Sig.	.022

a. Friedman Test

The mean score of questionnaire item 1a (music understanding) for Treatment 1 was significantly different (p-value<0.05) from the score for Treatment 2. See Figure 4-8 below.

Figure 4-8: Difference of mean values of students' musical understanding before and after each of the two treatments (different proportion of time devoted to providing music experiences and giving information).

Treatment One

Friedman Test

Ranks [a]

	Mean Rank
P1A	1.57
P01A	1.43

a. METHOD = 1

Test Statistics [a,b]

N	72
Chi-Square	3.846
df	1
Asymp. Sig.	.050

a. Friedman Test

b. METHOD = 1

Treatment Two

Friedman Test

Ranks [a]

	Mean Rank
P1A	1.54
P01A	1.46

a. METHOD = 2

Test Statistics [a,b]

N	79
Chi-Square	1.690
df	1
Asymp. Sig.	.194

a. Friedman Test

b. METHOD = 2

The difference suggests that Treatment 1 (more time for musical experience than for information about Luogudianzi) did not help students' musical understanding of music as there was a lower mean score in Treatment 1 after the treatment. However, neither group of students scored high after its treatment. Students of both treatment groups were limited to describing the physical elements of the music, such as sound quality and sound effects and the different speeds of the music, or 'materials' of the

music.

Questionnaire Item 3a. ('The aspects of music I know more about are ...'

For item, 3a, the Friedman test also showed a significant difference between Treatment 1 and Treatment 2. Figure 4-9, below shows that the probability of the difference being due to chance was less than 1 in 1000 ($p<0.001$)

Figure 4-9: Difference in students' musical understanding of the series of Luogudianzi as shown in questionnaire item 3.a: 'The aspects of music I know more about are ...' , using different proportions of time.

Friedman Test

Ranks

	Mean Rank
PRE3A	1.40
PO3A	1.60

Test Statistics [a]

N	146
Chi-Square	10.976
df	1
Asymp. Sig.	.001

a. Friedman Test

The mean scores for the two sets of responses to Item 3a (music understanding) for Treatment 2 were significantly different (p-value<0.0001) from those for Treatment 1 See Figure 4-10 below.

Figure 4-10: Difference of mean values of students' musical understanding to questionnaire item 3a.before and after each of the two treatments (different proportion of time to musical experience and information of music)

Treatment One

Friedman Test

Ranks [a]

	Mean Rank
PRE3A	1.47
PO3A	1.53

a. METHOD = 1

Treatment Two

Friedman Test

Ranks [a]

	Mean Rank
PRE3A	1.33
PO3A	1.67

a. METHOD = 2

Treatment One	Treatment Two
Test Statistics [a,b] N 68 Chi-Square .444 df 1 Asymp. Sig. .505 a. Friedman Test b. METHOD = 1	Test Statistics [a,b] N 78 Chi-Square 14.696 df 1 Asymp. Sig. .000 a. Friedman Test b. METHOD = 2

The difference suggests that Treatment 2 was better for helping students' musical understanding as there was a higher score in Treatment 2 (less time for musical experience than for hearing information about Luogudianzi). However, neither of the treatment groups had a high score after the treatment. Students of both treatment groups knew about the physical elements of the music, such as sound quality and sound effects and the different speeds of the music, or 'materials' of the music.

The findings show that the two sub-hypotheses of Experiment 2 (a) music experience and music information provided in different sequences will have a different effect on students' attitudes towards traditional Chinese music and (b) music experience and music information provided in different sequences will have a different effect on students' musical understanding of that music are supported because the findings above show a significant difference between both the attitude and understandings scores for the two treatments. It is clear that the variable being tested in Experiment 2 affected both students' attitudes to and their musical understanding of Luogudianzi, and therefore the experiment offers support for the view that the variable, proportion of teaching time devoted to giving information and to providing musical experience affects students' personal knowledge of music.

4.4 Experiment 2 follow-up

The following interview data from the students and the teacher of Experiment 2 shed light on students' experience of the Luogudianzi, comments on the two teaching approaches, and factors that might affect the extent to which the teaching strategy can contribute to the acquisition of a personal knowledge of music.

The following interview data begin with students' experience of the two treatment groups, and then presents the regular teacher's observation on students' behaviour in the two treatment groups and his comments about the teaching approaches.

The group student interviews for Experiment 2 were conducted at LTP School, in an empty classroom on the day after the last lesson of Experiment 2. Four students were chosen at random from each class of the two treatment groups making sixteen interviewees. Each interview lasted about twenty minutes.

A. Students' experiences in learning Luogudianzi under different proportions of time for musical experience than to information of music

Students' were asked about their attitudes and understanding, as well as the teaching strategies they had experienced.

Students' attitudes towards the Luogudianzi

In the follow-up to Experiment 2, students of the two treatment groups showed that they were getting to like the Luogudianzi.

Began to like the Luogudianzi after its treatment

Treatment 1 (more time for music experience than for hearing information of Luogudianzi)

> 1C-23: ... I have changed my mind. I have begun to find it interesting. The music matches the play. I saw how people's feelings changed with the Luogudianzi.

Treatment 2 (less time for musical experience than for hearing information about Luogudianzi) made similar comments:

> 1D: I think it's quite good ... I started to think it was good. It was not that bad.
> 1D-36: I like it a little bit. It's so loud —— it's good!
> 1E-39: I thought it was good. The sounds were nice and the instruments are beautiful

However, there were contradictory preferences on the sounds of the instruments among the students of the two treatment groups.

Contradictory comments on the sounds of the instruments

Students of the two treatment groups who were interested in the sounds, and found them pleasing made the following comments:

Treatment 1 students

1C-16: I like the four main instruments of Beijing Opera. They could produce strange sounds but the sounds of the instruments were quite good.

1C-23: ... The sounds of the instruments were powerful and lively. I know how to play the instruments and the special meaning that the four main instruments represent.

Treatment 2 students

1E-39: I thought it was interesting because I thought the sound was nice... I know how to play it.

1D-25: I like them (the Chinese non-melodic percussion instruments). The sounds they make are loud enough. I know their names. I know how to make them sound.

1D-36: I like it a little bit because the sounds are loud. I know the sound and how to produce it.

Some found the sounds of the instruments were noisy and lacked variation. It was difficult to identify the sounds of the instruments. They became confused with one another. The students made the following comments.

Treatment 1 students said:

1C-07: I do not like the four main instruments of Beijing Opera much. They were noisy. They have no rhythm and the sound is squeaky.

1C-36: The instruments seemed OK to me. But I think it's noisy all the time, especially when you play all the instruments together. I could not hear them clearly.

A student of Treatment 2 said:

1D: I don't like the sound of the bo (鈸): it is noisy

Students' musical understanding of Luogudianzi

Students of Treatment 1 (those who had more time for musical experience than for hearing information of Luogudianzi) mentioned that Luogudianzi was expressive. It described people's emotions. They noticed the symbolic meaning of the instruments. They were able to manage how to play the instruments. Treatment 2 students (those who had more time for hearing information of Luogudianzi than for musical experience of Luogudianzi) were able to give an account of factual knowledge of Luogudianzi, for example, the symbolic meaning of the instruments. The teacher argued that a lack of training in music appraisal affected students' performances in describing music, in particular the students of Treatment 1.

The following is the feedback about students' understanding of the Luogudianzi for Treatment 1 and Treatment 2.

Found Luogudianzi expressive

Students of Treatment 1 (more time for music experience than for hearing information of Luogudianzi) commented that Luogudianzi was expressive. It described people's emotions.

1C-07: ... The instruments represent different people.
1C-16: ... Luogudianzi helps people to express their feelings. If it (Luogudianzi) is loud, it tells you that the person is very angry. When the sound (Luogudianzi) is quiet and soft, it tells you that the person is very doubtful.
1C-23: It describes a person's feeling. ...The music matches the play. I saw how people's feelings changed with the Luogudianzi.

Got acquainted with the sounds and the ways of playing Luogudianzi

They showed that they got acquainted with the sounds and knew how to play the four major instruments: the *xiaoluo*, *daluo*, *bo*, and *sadi* (the replacement for the *bangu*) used in Luogudianzi.

1A-20: ... I knew that gongs and drums were important instruments of Beijing Opera. They had many functions.
1A-30: ... Luogudianzi was very interesting ... I know how to play the instruments and the music (the Luogudianzi) of Beijing Opera ... It seemed interesting

Students in Treatment 2 (less time for musical experience than for hearing information about Luogudianzi) gave an account of Luogudianzi.

There is symbolic meaning in Luogudianzi

1E-39: I know their functions ... different sounds resemble different kinds of people. It could represent big or small people. It depicted people's facial expressions too.
1E-20: I know the meanings carried by the sounds of the instruments: for example, big gongs show that there are some big people coming while small gongs represent gentlemen or scholars

Students' feedback on the teaching strategies of the two treatment groups

The following reports the feedback on Treatment 1 (more time for music experience than for hearing information of Luogudianzi) and Treatment 2 (less time for music experience than for hearing information of

Luogudianzi) in turn, and then ends with similar comments of the students of the two treatment groups.

Treatment 1

Happy to have freedom to experience the sounds of the instruments

The students in Treatment 1 were very pleased to have the freedom to explore the sounds of the instruments by themselves.

Students in the Treatment 1 group said:

> 1A-10: The impressive part of the teaching was that he (the regular teacher) ... let us play different instruments.
> 1A-20: It was so impressive that Mr Wong (the regular teacher) ... asked us to beat them (the instruments) in different ways. Our classmates were creative in doing this.
> 1A-30: The thing that impressed me most ... was that I tried to play the instruments. I could make the sound with the instrument by myself. I learn how to play the instruments.
> 1C-16: ... we played the instruments and beat them —— that's the most impressive part ... I had rarely come across them, so I found it interesting when I beat them.

Group discussions opened avenue for sharing

The Treatment 1 students favoured group discussions. They were able to share their ideas about the Luogudianzi with their classmates. One of them said:

> 1C-07: Having discussions and giving an oral presentation to the teacher taught me more about Luogudianzi.

Treatment 2

Fun to play the instruments under teacher's supervision and guidance

Students of Treatment 2 commented that they learnt more about the instruments. They were getting interested in the instruments.

> 1E-20: The introduction to the instruments, like the big gongs, small gongs, *bo*, etc. was impressive. I learnt how to use them and how to play music with them. I like them more after these three lessons.
> 1D-25: Beating them (instruments) —— letting us play the instruments helped me learn more about it.

Information about Luogudianzi was dry

The Treatment 2 students said that the information about the instruments was not so interesting, although it was useful.

> 1D-25: It was boring when we came across the information printed in the transparencies, although it was useful.

Though students of the two treatment groups had different feedback on the teaching approaches, there were some similar comments.

Treatment 1 and Treatment 2

Listening enables free associations in Treatment 1 and 2

Students of two treatment groups mentioned that listening to the music was good. This provided them with a free encounter with the music.

One student of Treatment 1 said:

> 1A-10: The listening part moved me and the sound was special ... I was able to imagine many people playing with swords and riding horses, etc., while listening to it.

Another student in Treatment 2 had commented on listening activities:

> 1D: ...that's interesting when you are listening. It makes me think of many things. I imagined a lot.

Understanding Luogudianzi better with audio-visual materials in Treatment 1 and 2

Students of Treatment 1 stressed that having the music presented aurally and visually at the same time was better, because they could understand it better. Some of the Treatment 1 interviewees expressed it as follows:

> 1A-20: When I watched the video, it (the Luogudianzi) was very rhythmic. It could bring out the situations and reflect the person's emotions and feelings. The functions of Luogudianzi were clear.
>
> 1A-40: ...I prefer listening and watching a video at the same time ... I could follow what was happening by watching the video tape, even though I might not understand the *putonghua* so well.
>
> 1C-23: Watching TV (video clips) taught me more about the instruments and Luogudianzi. It was more interesting. It was easy to understand. I could imagine what they were doing in most of the cases.
>
> 1C-07: Watching the video taught me much more about it than just listening to it.

The Treatment 2 students had similar opinions. They said that watching the video clips of the Luogudianzi was meaningful. They could see how the Luogudianzi facilitated the actors' performances through the video clips. The students in the Treatment 2 group made the following comments after watching the video clips.

> 1E-39: ... Watching the video impressed me because I realized the sound of the drum (the Luogudianzi) went with the actors' facial expression. I could see this clearly.

1D: I liked watching TV (the video clips) most because I could see the people's actions ... I learn about the music (the Luogudianzi) and the actors' performances.

1D-36: ...I could understand clearly, when the teacher explained to me with the video clips. It's quite interesting ... Just listening to the music (Luogudianzi) was no good.

1D-25: Watching the video clips taught me more about Luogudianzi, although there were no subtitles. The background music (the Luogudianzi) and actors' performances amazed me.

B. Teacher's observation on the two approaches

The regular teacher commented on the two approaches to presenting Luogudianzi to students. I begin with the comments on Treatment 1 and then present the commonalities of Treatment 1 and Treatment 2.

Treatment 1

Students were highly motivated and more involved

The regular teacher observed that the Treatment 1 students were highly motivated in the first lesson. They were fascinated by the exploration of the sounds of the instruments. They were free to play the instruments in whatever ways they liked. Obviously, the Treatment 1 students were more involved in the first lesson than the students in the Treatment 2 group.

A: ... the approach (less information and more direct musical experience) produces immediate responses from the students. The students are more active and their responses in class are better. They are happier in the lesson.

More listening to the Luogudianzi failed to sustain students' interest in Luogudianzi as they were unfamiliar with Luogudianzi

A: They (students of Treatment 1) accepted it (Luogudianzi) easily at the beginning. However, it seemed that they did not like the Luogudianzi in the later stage ... I think it takes times to appreciate any kind of new music ...

A lack of analytical training on appraising music

The regular teacher observed that the students of Treatment 1 were able to describe the images in their minds when they were listening to the Luogudianzi: for example, it was about a war, a fight, or about a person who was walking quickly. They were aware mainly of the sound of the instruments. A lack of training in describing music or appraising music analytically was likely to be a reason for this emphasis, particularly in the case of Treatment 1.

Treatment 1 and Treatment 2

Not sensitive enough to point out the subtle changes in the Luogudianzi

The regular teacher pointed out that students in both treatment groups were not sensitive enough to spot other subtle changes in the Luogudianzi: for example, free combinations and repetition of rhythmic patterns.

Information was boring in Treatment 1 and 2

The regular teacher said the students of both treatment groups were bored when they came to the information about Luogudianzi in the second and third lessons. The regular teacher said:

> A: ... the other group (more information and less direct musical experience with the instruments) found the lesson boring because they were given too much information ... the students in the other treatment group looked bored as well (when students were hearing the information of Luogudianzi).

C. Extraneous factors that might affect the extent to which the teaching strategy can contribute to the acquisition of a personal knowledge of traditional Chinese music in Hong Kong secondary schools

The regular teacher of LTP School said that there could be other considerations affecting the extent to which the teaching strategy could contribute to the acquisition of a personal knowledge:

Considerations of students' age was crucial in making choice of teaching approaches

He explained that if the students were young, he would adopt the approach using less information and more direct musical experience, since he supposed that younger students would be happier having more direct contact with the instruments and the music, while older students might prefer to have more information.

> A: ...allow Form one students to touch the instruments and listen more, this could help them to understand the music better ... older students might feel that the informative materials could help them more.

Considerations of teaching materials and the objectives of lessons came before teaching approaches

The regular teacher said that teaching materials and the objectives of lessons also had to be taken into account in developing teaching approaches. He said that if he was going to teach a topic that involved a lot of information, he would prefer to use the more information less direct musical experience approach, as this might enable him to cover a lot of information in a shorter period of time. If he had to deal with the development of the students' musicianship, he would allow the students more direct musical experience, for he believed that this would enable them to build up and develop a deeper and better understanding of music.

A: ... In the approach involving more information and less direct musical experience, students can acquire more information in a shorter period of time.

A: But if it is on the training of musicianship, I prefer the approach of less information, more direct musical experience.

A capable and flexible teacher was more important than any teaching approaches

The regular teacher argued that the teacher's flexibility in adjusting teaching materials and ability in managing the students were more important than any teaching approaches. He stressed the fact that the vital issue of teaching was the teacher, not the teaching approach. It was the teacher who decided which way to teach.

He believed that if a teacher was capable and flexible enough in teaching, he would be able to adjust to the teaching context and would not go to any extreme. The teaching approach was then not a big issue in teaching.

A: In my opinion, a teacher plays an important role. If the teacher teaches in an interesting way, no matter which approach that teacher takes, the students will find it interesting.

Subject matter came before teaching approaches

The regular teacher stressed the fact that the teacher's knowledge of the topic was important. It the teacher knew the topic well, he or she could then decide on the most suitable teaching strategy, adjust the teaching

content, or design flexible teaching activities to suit the students.

> A: If he knows the topic well – he would know what teaching materials suit the students. He would know what to teach next and could anticipate the students' responses.

He further argued that the teacher should acquire a different level of knowledge of the music being taught. The teacher should have hands-on knowledge of the music and also know how to play the music. He said:

> A: I think, firstly, I should have knowledge about Luogudianzi ... It is not just some pieces of simple information but ... the knowledge about how ... how to play well ... how to appraise.

Educational theories were useful to experienced teachers, but might not be as useful for novice teachers

The teacher said that the experiments with the two teaching approaches were stimulating. He was aware that theoretical concepts of music teaching gave him a direction for formulating teaching approaches, and a reference point from which he could reflect on, evaluate, and possibly improve, his approach. He mentioned that he had not been as concerned with these theoretical aspects of teaching when he was new to the teaching profession. In the old days, he said, he treasured a number of practical 'tools': for example, the use of the hand-signs in the Kodály Choral Method, and the use of percussion instruments in the Carl Orff Method so that he could teach confidently. He was principally concerned with surviving in the teaching profession, and being able to control and manipulate the class during lessons. As he became more experienced, he became more aware of music teaching theory. He emphasized the fact that inexperienced teachers would not be as interested in the theories of teaching as in practical and feasible approaches that would help them do their job.

> A: ... If I were a novice teacher, I would need teaching tools (teaching approaches)... as I became more experienced ... I would need a theoretical concept to help me to judge and to justify which approach to choose.

The statistical analysis shows that different proportions of teaching time devoted to giving information and to providing musical experience affected students' attitudes to and musical understanding of the Luogudianzi. Treatment 2 (less time for musical experience than for hearing information about Luogudianzi) was better for helping students' attitudes. However, neither group scored high after the treatment, an indication that they did not

really enjoy the activity under either of the treatments.

Comments on the two teaching approaches from the students and the regular teacher showed that students of the two treatment groups were getting to like the Luogudianzi. They found the Luogudianzi was interesting but they could not stand the sounds. There were contradictory preferences on the sounds of the instruments among the students of the two treatment groups. Some found the sounds of the instruments were powerful, varied and interesting, but some found them noisy and lacking in variation. The students of both two treatment groups mentioned that Luogudianzi was expressive. It described people's emotions. They noticed the symbolic meaning of the instruments. Students of Treatment 1 (more time devoted to providing musical experience than to giving information) were happy to have the freedom to experience the sounds of the instruments. They found group discussions were very fruitful, as they were able to share their musical experiences. Students of Treatment 2 (less time devoted to providing musical experience than to giving information) enjoyed playing the instruments. They found hearing the information of Luogudianzi could be dry. The regular teacher commented that Treatment 1 motivated students highly and maximized students' participation. However, more listening to music in Treatment 1 could not sustain students' interest and attention. The teacher argued that a lack of training on music appraising affected students' performances in describing music, in particular the students of Treatment 1.

4.4 Experiment 3

The hypotheses tested in Hypothesis 3 were:

(a) The level of instructional framing, that is the degree of student autonomy allowed in music activities, will affect students' attitudes towards traditional Chinese music.

(b) The level of instructional framing will affect students' understanding of that music.

(c) The level of instructional framing will affect students' perception of that music.

So I compared the data from the questionnaires, administered after

each treatment for Treatment 1 (more students' control over music activities) with similar data for Treatment 2 (less students' control over music activities) to see if there was support for the hypothesis.

4.4.1 Attitudes to the Luogudianzi

The Repeated Measure 3-way ANOVA was used to determine whether responses to the questionnaires were significantly different for the two treatments after the teaching. The mean values of the Treatment Group 1, (those who had more students' control over music activities), and Treatment Group 2, (those who had less students' control over music activities) are shown in Figure 4-11.

Figure 4-11: Mean values of students' attitudes towards the Luogudianzi under different students' control over music activities or 'framing'.

	Before treatment mean	After treatment mean	Number of students	
Treatment 1	3.8537	4.5732	82	F=1.957,
Treatment 2	3.8313	4.1807	83	NS

There was no significant difference between students' responses to the attitude items for Treatment 1 and students' responses to the attitude items for Treatment 2. The p-value was not significant. This shows that different degree of student autonomy allowed in music activities did not affect students' attitudes to Luogudianzi. The hypothesis that the level of instructional framing, that is the degree of student autonomy allowed in music activities, will affect students' attitudes towards traditional Chinese was not accepted.

4.4.2 Understanding of Luogudianzi

While difference between Treatment 1 and Treatment 2 responses to the attitude item in the questionnaire was not significant, there was a significant difference between Treatment 1 and Treatment 2 responses to the one questionnaire item that tested students' musical understanding of Luogudianzi by asking students to show their musical understanding of Luogudianzi by describing it in detail.

The Friedman test showed a significant difference between Treatment 1 and Treatment 2. Figure 4-12 below shows that the probability

of the difference being due to chance was less than 1 in 10000(<.0001).

Figure 4-12: Differences in students' musical understanding as shown in the questionnaire item of asking students to describe their musical understanding of Luogudianzi in detail.

Friedman Test

Ranks

	Mean Rank
preund	1.37
pound	1.63

Test Statistics [a]

N	168
Chi-Square	21.043
df	1
Asymp. Sig.	.000

a. Friedman Test

The mean scores for the two sets of responses to the questionnaire item (musical understanding) for Treatment 2 were significantly different (p-value<0.0001) from those for Treatment 1. See Figure 4-13 below.

Figure 4-13: Difference of mean values of students' musical understanding to questionnaire item before and after each of the two treatments (different degree of students' control over music activities).

Treatment One

Friedman Test

Ranks

	Mean Rank
preund	1.45
pound	1.55

Test Statistics [a]

N	83
Chi-Square	1.723
df	1
Asymp. Sig.	.189

a. Friedman Test

Treatment Two

Friedman Test

Ranks

	Mean Rank
preund	1.29
pound	1.71

Test Statistics [a]

N	85
Chi-Square	27.222
df	1
Asymp. Sig.	.000

a. Friedman Test

The difference suggests that Treatment 2 was better for helping students' musical understanding as there was a higher score in Treatment 2 (less students' control over music activities). However, neither of the treatment groups had a high score after the treatment. Students of both treatment groups knew about the physical elements of the music, such as sound quality and sound effects and the different speeds of the music, or the

'material' of the music.

These findings showed that the hypothesis that the level of instructional framing, that is the degree of student autonomy allowed in music activities, will affect students' understanding of that music could be accepted.

4.4.3 Musical perception of Luogudianzi

The Repeated Measure 3-way ANOVA was used to determine whether responses to the questionnaires were significantly different for the two treatments after the teaching. The mean values of the Treatment Group 1, (those who had more students' control over music activities), and Treatment Group 2, (those who had less students' control over music activities) are shown in Figure 4-14

Figure 4-14: Difference of mean values of students' musical perception to questionnaire item before and after each of the two treatments (different degree of students' control over music activities).

Treatment	Musical perception	Before treatment mean	After treatment mean	No. of students	
1	Thin/thick	4.6867	5.2651	83	F=.070,
2		4.4643	5.1071	84	NS
1	Small/large	5.2169	5.4458	83	F=.355,
2		4.9146	5.0000	82	NS
1	Lifeless/animated	5.1220	4.5488	82	F=3.881,
2		5.1250	5.2125	80	NS
1	Dark/bright	5.5122	5.5854	82	F=.170,
2		5.7037	5.6790	81	NS
1	All the	4.0723	4.4578	83	F=.047,
2	same/varied	4.1566	4.4578	83	NS
1	Simple/complex	4.5301	4.6988	83	F=.587,
2		4.3537	4.2561	82	NS
1	Worthless/valuable	4.0741	4.4815	81	F=1.697,
2		4.3494	4.4096	83	NS
1	Boring/interesting	3.8916	4.9398	83	F=.895,
2		4.0494	4.8025	81	NS

There was no significant difference between students' responses to the musical perception items for Treatment 1 and students' responses to the attitude items for Treatment 2. The p-values were not significant. This shows that different degree of student autonomy allowed in music activities did not affect students' perception to Luogudianzi. The hypothesis that the level of instructional framing, that is the degree of student autonomy allowed in music activities, will affect students' perception to the

Luogudianzi was not accepted.

The findings above show that the musical understanding item shows a significant difference between Treatment 1 and Treatment 2, but the attitude items and the musical perception items showed no significant difference between Treatment 1 and Treatment 2. Therefore Hypothesis (b) the level of instructional framing, that is the degree of student autonomy allowed in music activities, will affect students' understanding is accepted while Hypothesis (a) the level of instructional framing, that is the degree of student autonomy allowed in music activities, will affect students' attitudes towards traditional Chinese music and Hypothesis (c) the level of instructional framing, that is the degree of student autonomy allowed in music activities, will affect students' perception of that music are rejected. It is clear that the variable being tested in Experiment 3 did not affect both (a) attitudes towards, (b) musical understanding of and (c) the musical perception of Luogudianzi, and therefore the experiment offers only partial support for the view that the variable students' control over music activities or 'framing' affects personal knowledge of music.

4.5. Experiment 3 follow-up

Though the hypothesis for Experiment 3 was only partly supported, the interview data from the students and the teacher of Experiment 3 below revealed students' experience of the Luogudianzi, comments on the two teaching approaches, and factors that might affect the extent to which the teaching strategy can contribute to the acquisition of a personal knowledge of music.

The following interview data begin with students' experience of the two treatment groups, and then present the regular teacher's observations on students' behaviour in the two treatment groups and his comments about the teaching approaches.

The group student interviews for Experiment 3 were conducted at LTP School, in an empty classroom room, on the day after the last lesson of

Experiment 3. Seven and eight interviewees were chosen at random from each class of the two treatment groups making a total of thirty interviewees. Each group interview lasted about twenty minutes.

A. Students' experiences in learning Luogudianzi under different students' control over music activities

Students were asked about their attitudes, and perception, as well as the teaching strategies they had experienced.

Students' attitudes towards the Luogudianzi

The following reports students' attitudes towards the Luogudianzi on Treatment 1 (more students' control over music activities) and Treatment 2 (less students' control over music activities) in turn, and then ends with similar comments of the students of the two treatment groups.

Treatment 1

Feeling good about Luogudianzi in playing and composing

Some Treatment 1 students said that playing and composing Luogudianzi freely made them feel good about the Luogudianzi.

1A (6): I thought the sound I beat by myself was very nice! To play the Luogudianzi in my own way is more interesting!

1A (1): I also prefer to play the Luogudianzi in my own way. Yes, I like them. They are good.

1D (41): I liked them (the Luogudianzi) after I had listened to them and knew more about them. I thought they were good.

1D (16): I am getting to like them (Luogudianzi) more now, because I have composed some by myself... I feel that I'm able to compose

Treatment 2

Being impressed by the ways of playing the Luogudianzi

All the eight interviewees from the Treatment 2 group said that they were impressed by the ways of playing the Luogudianzi. One of them said

1C(40): ... The more I like them (the Luogudianzi), the more I play them. The more I play them, the more I like them.

Treatment 1 and Treatment 2

Getting to like the Luogudianzi

The students in both treatment groups commented that they started to like the Luogudianzi after the six lessons. They were impressed by the skills required in playing Luogudianzi. They discovered that it was not as easy as they had thought, and was in fact very demanding. The Treatment 1

students made the following comments:

1A (1): At first, I thought they were noisy and monotonous (the Luogudianzi). But when I learnt more about them, I realized it was not easy, as I had thought. There is a lot of variety.

1A (25): ... I didn't like the Luogudianzi at the beginning... But I changed my mind...They are so great! You know, it was difficult to play the Luogudianzi.

Treatment 2 students had similar opinions.

1C (4): ...started to like them. The more I play, the more I know.

1E (25): I like them (the Luogudianzi) too... now they seem rhythmical and the beats are nice.

Students' musical perception of Luogudianzi

What follows are the two treatment groups students' musical perception of Luogudianzi.

Treatment 1 and Treatment 2

Students discovered that Luogudianzi were valuable

Students were aware that playing Luogudianzi was not simple. They were impressed by the demanding skills required.

The Treatment 1 students made the following comments:

1A (1): At first, I thought they were noisy and monotonous (the Luogudianzi). But when I learnt more about them, I realized it was not easy, as I had thought. There is a lot of variety.

1A (25): ... I changed my mind when I found the musician played the Luogudianzi so well. They are so great! You know, it was difficult to play the Luogudianzi.

Treatment 2 students had similar opinions.

1C (4): At the beginning, I thought that they were uninteresting. But after the lessons, I knew more (about the history and the skills of Luogudianzi) and started to like them. The more I play, the more I know.

1E (25):I like them (the Luogudianzi) too... they seem rhythmical and the beats are nice

Students' feedback on the teaching strategies of the two treatment groups

I begin with students' feedback on the teaching strategy of Treatment 1 (more students' control over music), and then continue with the feedback on the teaching strategy of Treatment 2 (less students' control over music).

Treatment 1

Experiences of the sounds of the instruments prepared students for composing

Most of the Treatment 1 students said that they found it interesting to experience the sounds of the instruments. They learnt more about the sound qualities of the instruments. The sounds of the instruments were expressive. This music activity prepared them to compose Luogudianzi better. A student of Treatment 1 said:

1A(25): I think it's very good that you (the teacher) let us (students) play first (the instruments) and gave us time to explore the sounds of the instruments. This enabled us to compose more rhythmical Luogudianzi.

Good to compose Luogudianzi with a combination of new and learnt Luogudianzi

Some students found that it was good to compose new Luogudianzi by combining the taught Luogudianzi in different orders for expressions.

GW: Did you find it interesting to play the instruments, to learn the Luogudianzi, and then rearrange them?
1A(25): Yes. It was. It was better that we could refer to the Luogudianzi that we learnt and add some rhythms to it.
GW: Do you like to compose the Luogudianzi all by yourselves?
1D(34): No. It's more difficult to create the music (Luogudianzi) by ourselves. It's easier to re-arrange the order of the Luogudianzi.

Different preference of playing or composing the Luogudianzi first

Some students of Treatment 1 preferred to learn how to play the Luogudianzi before making up new Luogudianzi. They found this approach would arouse their interest in learning Luogudianzi. However, some students disagreed. They said their focus would then be shifted to the skills of playing the Luogudianzi rather than composing.

1A (1): I don't think it would be very good (to learn playing Luogudianzi first) ... you would only focus on the skills of playing the Luogudianzi.
1A (37): ... If you learn the Luogudianzi first you won't be interested in composing.
1A (38): ...you will tend to memorize the taught Luogudianzi... there won't be much composing at the end.

Treatment 2

Playing Luogudianzi under teacher's instruction was better than receiving information of Luogudianzi

Treatment 2 students said that it was fine to play the Luogudianzi

under the teacher's instruction. They found the Luogudianzi mnemonics difficult to follow, but this was far better than just being given information about Luogudianzi. They said that they had found this extremely boring; in fact, they almost fell asleep.

1C(40): There are many difficult words (the Luogudianzi mnemonics). That makes me feel bored.
1C(4): It was okay when we were playing the Luogudianzi by groups ...the worst was that when the teaching (giving information) was going on, we almost fell asleep.

To compose Luogudianzi by combining different Luogudianzi through story telling was more interesting than just playing them

Most of the students of Treatment 2 said that they liked the way of telling a story by combining the Luogudianzi they had learnt. This allowed them more room for expression.

1C(40): This was more interesting. ... That was good.
1C(11): It seems that this would give you room to imagine ...You could make more changes.
1C(14): I think it would be more creative...
1C(4): I will be more interested in playing the Luogudianzi in this way.

Different views of playing the instruments and Luogudianzi in their own way first or learning the correct way of playing first

Most of the Treatment 2 students said they would like to play the instruments and the Luogudianzi in their own way.

1E(9): I prefer to play the instruments in my own way first. We can then become familiar with the sounds of the instruments that we made.
1E(33): I prefer to play in my own way first, ...: that helps us to understand the playing skills.

However, some of them did stress that it was necessary to learn the correct way of playing the Luogudianzi, and that this would not diminish their interest.

1E(11): ... It makes us get to know the rhythms. It helps us count the beats correctly
1E(38): ... This would make sure that I know how to play nicely. You know, the sounds of the instruments could be piercing and make people feel uncomfortable.
1E(25): ... If we just play the instruments freely, the sounds we beat are piercing. As a result, you lose interest.

B. Teacher's observation on the two approaches

The regular teacher commented on the two teaching approaches to presenting Luogudianzi to students. He began with Treatment 1 (more student control over music) and then Treatment 2 (less student control over music). They are as follows:

Treatment 1

Students were highly motivated but doubtful if composing Luogudianzi helped to learn more about Luogudianzi

The teacher observed that the students from both treatment groups were happy to play the Luogudianzi. They were excited to be given practical work to do on Luogudianzi. However, he observed that the Treatment 1 students were highly motivated and more excited in the lesson. He observed that the students who had been given more autonomy in using the Luogudianzi had more opportunities to express themselves with the Luogudianzi. However, he questioned whether the Treatment 1 students were learning much about the traditional Chinese Luogudianzi, since they were doing so many composition activities, rather than focusing on playing the traditional Luogudianzi. By contrast, the students of Treatment 2 were focusing on acquiring knowledge about Luogudianzi, since they played the traditional Luogudianzi. It seemed that they were focusing more on the Luogudianzi, and less on their own creative abilities.

Treatment 2

It was easier to get control over the class

The teacher agreed that the teaching approach used in Treatment 2 made it easier for him to control the class. There was not much noise, since the students were under the teacher's control. This practice suited the classroom situation in Hong Kong. Making too much noise in music lessons was not a desirable state of affairs.

> Teacher: Generally, classrooms (in Hong Kong) are small, but there are many students. ... teacher has to take particular care with classroom management. Controlling the class is one of the issues I have to take into account when deciding on teaching approaches.

C. Extraneous factors that might affect the extent to which the teaching strategy can contribute to the acquisition of a personal knowledge of traditional Chinese music in Hong Kong secondary schools

The regular teacher of LTP School expressed that there could be other concerns affecting the extent to which the teaching strategy could contribute to the acquisition of a personal knowledge.

Teaching objectives and students' background knowledge of Luogudianzi were crucial factors for considerations

The regular teacher stated that if he was asked to decide on the teaching approach, he would consider the teaching objectives and the students' level of knowledge about Luogudianzi before making any decision. He stressed that if the students did not know much about Luogudianzi, and the teaching objectives were concerned with creativity, he would take Treatment 1 (more students' control over music), since this approach allowed the students to have more contact with Luogudianzi, through which students could develop the skills required to play the Luogudianzi. However, if the students already had a good knowledge of Luogudianzi, he would then put the emphasis on how to use the Luogudianzi, for example, how to use *Jijifeng* or *Niusi* for expressions like expressing their feelings.

Concerns of controlling the class was the key issue in developing teaching strategies

The regular teacher said that controlling the class was the crucial consideration in developing teaching strategies.

> Teacher: In principal, teachers should not be like that (taking control over the class to be the first priority in teaching). Nevertheless, in practice, a music teacher has to be like that. The noise made by the students would be very disruptive for the class next door. I'm afraid that the music teacher will be forced to adopt a rather passive teaching strategy so that the students can be under his control.

The statistical analysis shows that, over the short period of time allocated to these two approaches, changes in the level of framing, by themselves, did not affect students' attitudes to, music understanding of and perception of the Luogudianzi. However, the comments of students and teachers suggest more positive outcomes. For example, students of Treatment 1 (more students' control over music activities) found it was fun to compose Luogudianzi. The experience of experimenting with the sound of the instruments had prepared them for composing Luogudianzi. However, student of Treatment 1 did not have a common view that composing Luogudianzi prior playing the Luogudianzi was helpful for composing Luogudianzi. Students of Treatment 2 (less students' control over music activities) found that playing Luogudianzi was far better than just being giving information about Luogudianzi. They further said that it was more

interesting to compose Luogudianzi by combining different Luogudianzi through story telling than just playing them. On the whole, students of the two treatment groups were getting to like the Luogudianzi, and they discovered that Luogudianzi were valuable. The regular teacher commented that students of Treatment 1 (more student control over music activities) were highly motivated and it was easier to get control over the class in Treatment 2 (less student control over music). The regular teacher said that other concerns, such as the teaching objectives, the students' level of knowledge about Luogudianzi, and the control of the class, were worth considering.

4.6 Experiment 4

In order to test the hypotheses in Experiment 4 (Repeated listening rather than one-off listening), I have expanded the two hypotheses to eight. They are as follows:

(a) Attitude scores after Exposure 2 will be higher than those after Exposure 1 on all the attitude questionnaire items.

(b) Attitude scores after Exposure 3 will be higher than scores after Exposure 2 on all the attitude questionnaire items

(c) Musical perception scores after Exposure 2 will be higher than scores after Exposure 1 on all the pairs of adjectives items in the questionnaire measuring musical perception

(d) Musical perception scores after Exposure 3 will be higher than scores after Exposure 2 on all pairs of adjectives items in the questionnaire measuring musical perception

The hypotheses that tested the effect of repeated listening rather than one-off listening for the students who scored 4 or below after Exposure 1 are as follows:

(e) Attitude scores after Exposure 2 will be higher than scores after Exposure 1 on all the attitude questionnaire items for students who scored 4 or below after Exposure 1

(f) Attitude scores after Exposure 3 will be higher than the scores after Exposure 2 on all the attitude questionnaire items for students who scored 4 or below after Exposure 2

(g) Musical perception scores after Exposure 2 will be higher than scores after Exposure 1 on all the pairs of items of musical perception for students who scored 4 or below after Exposure 1

(h) Musical perception scores after Exposure 3 will be higher than scores after Exposure 2 on all pairs of items of musical perception for students who scored 4 or blew after Exposure 1

So data from the questionnaires after each exposure (listen to the Luogudianzi), administered three times at weekly intervals were compared to see if there was support for the hypotheses.

In the following, the findings of students' attitudes to and the musical perception of Luogudianzi are reported first with (a) all the students' attitudes to and the musical perception of Luogudianzi, and then (b) the students' attitudes to and the musical perception of Luogudianzi of those who scored 4 or below after Exposure 1. There were three attitudes questionnaire items (questionnaire item 1, 3 and 4) and one questionnaire item concerning musical perception (questionnaire item 2) in the questionnaire for Experiment 4. I report the findings of the attitude questionnaire items first and then the musical perception item for (a) all the students, and then (b) for the students who scored 4 or below after Exposure 1.

4.6.1 Attitudes to the Luogudianzi of all the students

I used a t-test to compare three sets of scores: 1) the attitude scores for Exposure 1 and Exposure 2, 2) the attitude scores for Exposure 2 and Exposure 3, and 3) the attitude scores for Exposure 1 and Exposure 3. The report of the findings of the three questionnaire items that tested students' attitudes towards Luogudianzi are as follows:

Questionnaire item 1 (How much do you like this group of music extracts?)

For Item 1 of the questionnaire, a t-test showed that (a) the difference between the attitude scores for Exposure 1 and those for

Exposure 2, and (b) the difference between the attitude scores for Exposure 2 and those for Exposure 3 were not significant. Appendix Z2, Figure Z2-1 shows the findings. Therefore, Hypothesis 4(a) that attitude scores after Exposure 2 would be higher than those after Exposure 1, and 4(b) that the attitude scores after Exposure 3 would be higher than those after Exposure 2 were not accepted. Repeated listening did not affect students' attitudes towards Luogudianzi

Questionnaire item 3. (How often do you listen to this kind of music?)

For Item 3 of the questionnaire, a t-test showed that (a) the difference between the attitude scores for Exposure 1 and those for Exposure 2, and (b) the difference between the attitude scores for Exposure 2 and those for Exposure 3 were not significant. Appendix Z2, Figure Z2-2 shows the findings. Therefore, Hypothesis 4(a) that the attitude scores after Exposure 2 would be higher than those after Exposure 1, and 4(b) that the attitude scores after Exposure 3 would be higher than those after Exposure 2 were not accepted. Repeated listening did not affect students' attitudes towards Luogudianzi

Questionnaire item 4. (Would you buy this kind of CD?)

A t-test showed that the difference between the attitude scores for Exposure 1 and those for Exposure 2 was significant. The p-value was $p<0.05$. The difference suggests a lower score after Exposure 2. However, a-test showed that the difference between the attitude scores for Exposure 2 and those for Exposure 3 was not significant. Figure 4-15 below shows the findings.

Figure 4-15: Mean values of students' attitudes scores to Questionnaire item 4 after Exposure 1, Exposure 2 and Exposure 3.

Scales used	Paired mean values		Paired mean difference	Number of students	t	Sig. (2-tailed)
Would buy /would not buy	Exposure 1	6.30	.182	187	2.120	.035, P<.05)
	Exposure 2	6.12		187		
	Exposure 2	6.13	-.059	188	-.662	.509, NS
	Exposure 3	6.19		188		
	Exposure 1	6.31	.134	187	.1.496	.138, NS
	Exposure 3	6.18		187		

Therefore, Hypothesis 4(a) that attitude scores after Exposure 2 would be higher than those after Exposure 1, and 4(b) that the scores after Exposure 3 would be higher than those after Exposure 2 were not accepted.

4.6.2 Perception of Luogudianzi

I used a t-test to compare three sets of scores: 1) the perception scores for Exposure 1 and Exposure 2, 2) the perception scores for Exposure 2 and Exposure 3, and 3) the perception scores for Exposure 1 and Exposure 3, for the five pairs of adjective items of questionnaire Item 2, that tested students' musical perception of Luogudianzi. The findings are as follows:

Questionnaire item 2 (How do you feel about this group of music extracts?)

In the pair of adjectives 'uninteresting/interesting' of item 2, a t-test showed that the difference between the perception scores for the pair of adjectives for Exposure 1 and those for Exposure 2 was significant. The p-value was $p<0.05$. The difference suggests a lower score after Exposure 1. However, a t-test showed that the score difference between the perception scores for the same pair of adjectives for Exposure 2 and those for Exposure 3 was not significant. Figure4-18 below shows the findings.

Figure 4-16: Mean values of students' perception scores of the pair of adjectives 'uninteresting/interesting' to Questionnaire item 2 after Exposure 1, Exposure 2 and Exposure 3.

Pairs of adjectives	Paired mean values		Paired mean difference	Number of students	t	Sig. (2-tailed)
Uninteresting / interesting	Exposure 1 Exposure 2	3.80 3.28	.521	188 188	4.034	.000, P<0.05
	Exposure 2 Exposure 3	3.27 3.34	.074	190 190	-.556	.579, NS
	Exposure 1 Exposure 3	3.78 3.34	.447	188 188	3.321	.001, p<0.05

Therefore, Hypothesis 4(c) (the perception scores after Exposure 2 would be higher than those after Exposure 1) was accepted, but 4(d) that the scores after Exposure 3 would be higher than those after Exposure 2 was not accepted.

In the other four pairs of adjectives, 'valuable/worthless', 'simple/complex', 'varied/all the same' and 'small/large' of item 2, the t-test showed that (a) the difference between the perception scores for these pairs of adjectives for Exposure 1 and those for Exposure 2, and (b) the difference between the perception scores for these same pairs of adjectives for Exposure 2 and those for Exposure 3, were not significant. Details of the findings are shown in Appendix Z2, Figure Z2-3. Therefore, Hypothesis 4(c), that perception scores after Exposure 2 would be higher than those after Exposure 1, and 4(d), that the perception scores after Exposure 3 would be higher than those after Exposure 2, were not accepted.

In questionnaire item 2, the t-tests showed that the differences between (a) the perception scores for the four pairs of adjectives out of five that measured musical perception for Exposure 1 and those for Exposure 2 were not significant, and (b) the perception scores for the four pairs of adjectives out of five musical perception items for Exposure 2 and those for Exposure 3, were not significant as well. Therefore, Hypothesis 4(c) that the perception score after Exposure 2 would be higher than that after Exposure 1, was not accepted, and the hypothesis 4d that perception score after Experiment 3 would be higher than that of after Exposure 2, was also not accepted. Repeated listening did not affect students' perception towards the Luogudianzi.

The findings above showed that the four sub-hypotheses of Experiment 4 (Repeated listening rather than one-off listening), 4(a) attitude scores after Exposure 2 would be higher than those after Exposure 1, 4(b) the attitude scores after Exposure 3 would be higher than those after Exposure 2, 4(c) perception scores after Exposure 2 would be higher than those after Exposure 1, and (4d) the perception scores after Exposure 3 would be higher than those after Exposure 2, were not supported because the findings show (a) no attitude scores after Exposure 2 higher than those after Exposure 1, and no attitude scores after Exposure 2 higher than those after Exposure 3 and (b) no perception scores after Exposure 2 higher than those after Exposure 1, and no perception scores after Exposure 3 higher

than those after Exposure 3. It is clear that the variable being tested in Experiment 4 did not affect students' attitudes to and musical perception of Luogudianzi, and that this experiment offered no support for the view that variable, repeated listening rather than one-off listening affected students' personal knowledge of music.

4.6.3 Attitudes to the Luogudianzi for students who scored 4 or below after Exposure 1

As I expected, students who had not used the extreme limits of the scales, the positive end to describe the music after Exposure 1, were able to offer a more emphatic rating on attitudes to and musical perception of Luogudianzi, after Exposure 2, I therefore used a t-test to compare three sets of scores: 1) the attitude scores for Exposure 1 and Exposure 2, 2) the attitude scores for Exposure 2 and Exposure 3, and 3) the attitude scores for Exposure 1 and Exposure 3, for students who scored 4 or below after Exposure 1. The findings of the three questionnaire items, number 1, 3 and 4, that tested students' attitudes towards Luogudianzi, are as follows:

Questionnaire item 1. (How much do you like this group of music extracts)

For Item 1 of the questionnaire, a t-test showed that (a) the difference between the attitude scores for Exposure 1 and those for Exposure 2, for students who scored 4 or below after Exposure 1, was significant. The p-value was $p<0.05$. The difference suggests a higher score after Exposure 2, and (b) the difference between the attitude scores for Exposure 2 and those for Exposure 3, for those who scored 4 or below after Exposure 1, was not significant. Figure 4-17 below shows the findings.

Figure 4-17: Mean values of the students' attitudes scores to Questionnaire item 1 after Exposure 1, Exposure 2 and Exposure 3 for those who score 4 or below after the first exposure.

Scales used	Paired mean values		Paired mean difference	Number of students	t	Sig. (2-tailed)
Dislike very	Exposure 1	2.94	-1.063	16	-4.25	.001,
much	Exposure 2	4.00		16		P<0.05
/Like much	Exposure 2	4.00	.188	16	.356	.727, NS
	Exposure 3	3.81		16		
very much	Exposure 1	2.94	.875	16	-2.406	.029,
	Exposure 3	381		16		P<0.05

Therefore, Hypothesis 4(e) that attitude scores after Exposure 2 would be higher than those after Exposure 1 for students who scored 4 or below after Exposure 1, was accepted (as expected), but Hypothesis 4(f), that scores after Exposure 3 would be higher than those after Exposure 2 for students who scored 4 or below after Exposure 1, was not accepted.

Questionnaire item 3. (How often do you listen to this kind of music?)

For Item 3 of the questionnaire, a t-test showed that (a) the difference between the attitude scores for Exposure 1 and the higher scores for Exposure 2, for the students who scored 4 or below after Exposure 1, was significant. The p-value was $p<0.05$. The difference between the attitude scores for Exposure 2 and those for Exposure 3, for those who scored 4 or below after Exposure 1, was not significant. Figure 4-18 below shows the findings.

Figure 4-18: Mean values of students' attitudes scores to Questionnaire item 3 after Exposure 1, Exposure 2 and Exposure 3 for those who score 4 or below after the first exposure.

Scales used	Paired mean values		Paired mean difference	Number of students	t	Sig. (2-tailed)
Daily/twice a week/weekly/	Exposure 1	3.75	-..688	16	-2.416	.029,
	Exposure 2	4.44		16		P<.05
mostly/yearly/ Seldom/-never	Exposure 2	4.44	.188	16	.565	.580, NS
	Exposure 3	4.25		16		
	Exposure 1	3.75	-.500	16	-1.291	.216, NS
	Exposure 3	4.25		16		

Therefore, Hypothesis 4(e), that attitude scores after Exposure 2 would be higher than those after Exposure 1 for students who scored 4 or below after Exposure 1, was accepted (as expected), but Hypothesis 4(f),

that scores after Exposure 3 would be higher than those after Exposure 2 for students who scored 4 or below after Exposure 1, was not accepted.

Questionnaire item 4. (Would you buy this kind of CD?)

For Item 4 of the questionnaire, a t-test showed that (a) the difference between the attitude scores for Exposure 1 and those for Exposure 2, for the students who scored 4 or below after Exposure 1, was not significant, and (b) the difference between the attitude scores for Exposure 2 and those for Exposure 3, for the students who scored 4 or below after Exposure 1, was also not significant. Figure 4-19 below shows the findings.

Figure 4-19: Mean values of students' attitudes scores to Questionnaire item 4 after Exposure 1, Exposure 2 and Exposure 3 for those who score 4 or below after the first exposure.

Scales used	Paired mean values		Paired mean difference	Number of students	t	Sig. (2-tailed)
Would buy /would not buy	Exposure 1	4.00	-.250	16	-.532	.063, NS
	Exposure 2	4.25		16		
	Exposure 2	4.25	-.375	16	-8.24	.423, NS
	Exposure 3	4.63		16		
	Exposure 1	4.00	.-.625	16	.1.496	.155, NS
	Exposure 3	4.63		16		

Therefore, Hypothesis 4(e), that attitude scores after Exposure 2 would be higher than those after Exposure 1 for students who scored 4 or below after Exposure 1, and Hypothesis 4(f), that scores after Exposure 3 would be higher than those after Exposure 2 for students who scored 4 or blew after Exposure 1, were not accepted.

4.6.4 Perception of Luogudianzi for students who scored 4 or below after Exposure 1

In the following, I used a t-test to compare three sets of scores: 1) the perception scores for Exposure 1 and Exposure 2, 2) the perception scores for Exposure 2 and Exposure 3, and 3) the perception scores for Exposure 1 and Exposure 3, for the five pairs of adjectives of questionnaire item 2, that measured the musical perception of Luogudianzi for students who scored 4 or below after Exposure 1. The findings are as follows:

Questionnaire item 2 (How do you feel about this group of music extracts?)

In the pair of adjectives 'valuable/worthless' of item 2, a t-test showed that (a) the difference between the perception scores for the pair of adjectives for Exposure 1 and those for Exposure 2, for the students who scored 4 or below after Exposure 1, was significant. The p-value was $p<0.05$. The difference suggests a higher score after Exposure 1, but (b) the difference between the perception scores for the same pair of adjectives for Exposure 2 and those for Exposure 3, for the students who scored 4 or below after Exposure 1, was not significant. Figure 4-20 below shows the details.

Figure 4-20: Mean values of students' perception scores of 'valuable/worthless' to Questionnaire item 2 after Exposure 1, Exposure 2 and Exposure 3 for those who score 4 or below after the first exposure.

Pairs of adjectives	Paired mean values	Paired mean difference		Number of students	t	Sig. (2-tailed)
Valuable/ worthless	Exposure 1 Exposure 2	4.58 4.93	-.347	101 101	-2.343	.021, P<0.05
	Exposure 2 Exposure 3	4.93 4.79	.139	101 101	.911	.365, NS
	Exposure 1 Exposure 3	4.58 4.78	-.206	102 102	-1.230	.222,NS

Therefore, Hypothesis 4(g), that perception scores after Exposure 2 would be higher than those after Exposure 1 for students who scored 4 or below after Exposure 1, was accepted (as expected), but Hypothesis 4(h), that scores after Exposure 3 would be higher than those after Exposure 2 for students who scored 4 or below after Exposure 1, was not accepted.

In the pair of adjectives 'simple/complex' of item 2, a t-test showed that (a) the difference between the perception scores for the pair of adjectives for Exposure 1 and those for Exposure 2, for the students who scored 4 or below after Exposure 1, was not significant, but (b) the difference between the perception scores for the same pair of adjectives for Exposure 2 and those for Exposure 3, for the students who scored 4 or below after Exposure 1, was significant. The p-value was $p<0.05$. The difference suggests that students who scored 4 or below perceived the music to be 'complex', as a higher mean score was observed after Exposure 3. Findings are shown in Figure 4-21 below.

Figure 4-21: Mean values of students' perception scores of the pair of adjectives 'simple/complex' to Questionnaire item 2 after Exposure 1, Exposure 2 and Exposure 3 for those who scored 4 or below after the first exposure.

Pairs of adjectives	Paired mean values		Paired mean difference	Number of students	t	Sig. (2-tailed)
Simple/ complex	Exposure 1 Exposure 2	3.12 3.25	-.129	101 10	-.745	.458, NS
	Exposure 2 Exposure 3	3.25 3.76	-.515	101 101	-2.657	.009, p<0.05
	Exposure 1 Exposure 3	3.11 3.75	-.637	102 102	-3.392	.001, p<0.05

Therefore, Hypothesis 4(g), that perception scores after Exposure 2 would be higher than those after Exposure 1 for students who scored 4 or below after Exposure 1, is not accepted, but Hypothesis 4(h), that scores after Exposure 3 would be higher than those after Exposure 2 for students who scored 4 or below after Exposure 1, was accepted (as expected).

In the pair of adjectives 'varied/all the same' of item 2, a t-test showed that (a) the difference between the perception scores for the pair of adjectives for Exposure 1 and those for Exposure 2, for the students who scored 4 or below after Exposure 1, was significant. The p-value was $p<0.05$. The difference suggests a higher score after Exposure 1, but (b) the difference between the perception scores for the same pair of adjectives for Exposure 2 and those for Exposure 3, for the students who scored 4 or below after Exposure 1, was not significant. Findings are shown in Figure 4-22 below.

Figure 4-22: Mean values of students' perception scores of the pair of adjectives 'varied/all the same' to Questionnaire item 2 after Exposure 1, Exposure 2 and Exposure 3 for those who scored 4 or below after the first exposure.

Pairs of adjectives	Paired mean values		Paired mean difference	Number of students	t	Sig. (2-tailed)
Varied/ all the same	Exposure 1 Exposure 2	3.62 4.08	-.455	101 101	-3.038	.003, p<0.05
	Exposure 2 Exposure 3	4.08 4.25	-.168	101 101	-.970	.334, NS
	Exposure 1 Exposure 3	3.61 4.26	-.657	102 102	-3.434	.001, p<.05

Therefore, Hypothesis 4(g), that perception scores after Exposure 2 would be higher than those after Exposure 1 for students who scored 4 or blew after Exposure 1, was accepted (as expected), but Hypothesis 4(h), that scores after Exposure 3 would be higher than those after Exposure 2 for students who scored 4 or below after Exposure 1, was not accepted.

In the other two pairs of adjectives, 'uninteresting/interesting', and 'small/large' of item 2, the t-test showed that (a) the difference between the perception scores for these pairs of adjectives for Exposure 1 and those for Exposure 2, for the students who scored 4 or below after Exposure 1, was not significant; and (b) the difference between the perception scores for the same pairs of adjectives for Exposure 2 and those for Exposure 3, for the students who scored 4 or below after Exposure 1, was not significant as well. Findings are shown in Appendix Z2, Figure Z2-4. Therefore, Hypothesis 4(g), that perception scores after Exposure 2 would be higher than those after Exposure 1, for students who scored 4 or below after Exposure 1, was not accepted and Hypothesis 4(h), that scores after Exposure 3 would be higher than those after Exposure 2, for students who scored 4 or below after Exposure 1, was also not accepted.

In summary, the questionnaire item 2, the t-test showed that (a) the score differences between the perception scores for three pairs of adjectives out of five that measured musical perception for Exposure 1 and those for Exposure 2, for students who scored 4 or below after Exposure 1, were not significant, and (b) the score differences between the perception scores for four pairs of adjectives out of five that measured musical perception for Exposure 2 and those for Exposure 3, for students who scored 4 or below, were not significant. Figure 4-23 shows the tabulation of scores of five pairs of adjectives for after Exposure 2 and after Exposure 3, for students who scored 4 or below after Exposure 1.

Figure 4-23 Tabulation of scores for five pairs of adjectives after Exposure 2 and after Exposure 3, for students who scored 4 or below after Exposure 1.

Pairs of adjective items	After Exposure 2	After Exposure 3
'valuable/worthless'	Higher score	Not applicable
'simple/complex'	Not applicable	Higher score
'varied/all the same'	Higher score	Not applicable
'uninteresting/interesting'	Not applicable	Not applicable
'small/large'	Not applicable	Not applicable
Total	3 out of 5	1 out of 5

Therefore, Hypothesis 4(g), that perception scores after Exposure 2 would be higher than those after Exposure 1, for students who scored 4 or below after Exposure 1, was not accepted, and Hypothesis 4(h), that the perception scores after Exposure 3 would be higher than those after Exposure 2, for students who scored 4 or below after Exposure 1, was also not accepted.

The findings show that the fourth hypothesis was not supported for students who scored 4 or below after Exposure 1 since the scores for students' attitudes to, and musical perception of, Luogudianzi after the three exposures to it, for those who scored 4 or below after Exposure 1, were not significant. Therefore, there was insufficient evidence in this study to conclude that repeated listening affects students' attitudes to and musical perception of Luogudianzi for those who scored 4 or below after Exposure 1.

In short, the statistical analysis showed that repeated listening rather than one-off listening had no effect on students' personal knowledge of music for (a) all the students, and (b) students who scored 4 or below after Exposure 1, of Experiment 4.

4.7 Summary of the findings of the four experiments

In summary, the statistical analysis of data from Experiment 1 showed that over the short period of time allocated to these two approaches, changes of sequences of teaching by themselves did not have a different effect on both students' attitudes towards and musical understanding of the Luogudianzi. However, the comments of students and the teacher suggested were more positive.

In Experiment 2, the statistical analysis showed that different proportions of teaching time devoted to giving information and to providing musical experience had a different effect on students' attitudes to and musical understanding of the Luogudianzi. It suggests that Treatment 2 (less time for musical experience than for hearing information about Luogudianzi) was better for helping students' attitudes. Students of Treatment 2 had a higher score in attitudes towards the Luogudianzi after the treatment, though it was not in the direction expected. However, neither group scored high after the treatment, an indication that students did not really enjoy the activity under either of the treatments. The finding showed Treatment 1 (more time for musical experience than for information about Luogudianzi) had a lower score in music understanding of the Luogudianzi. The finding also showed that Treatment 2 (less time for musical experience than for information about Luogudianzi) helped students know more about aspects of Luogudianzi. There was a higher score in Treatment 2 after the treatment. However, students did not score high in the understanding of music after either treatment. Students of both treatment groups were limited to describing the physical elements of the music, such as sound quality and sound effects, and the different speeds of the music, or 'materials' of the music. In addition, the comments on the two teaching approaches by students and the regular teacher were positive. However, more listening to music in Treatment 1 could not sustain students' interest and attention. The teacher argued that a lack of training in appraising music affected students' performances in describing music, in particular the students of Treatment 1.

In Experiment 3, the statistical analysis showed that, over the short period of time allocated to these two approaches, changes in the level of framing did not, by themselves, affect students' attitudes to, and understanding and perception of, the Luogudianzi. However, the comments of students and teachers were more positive.

In Experiment 4 the hypothesis was not supported. The scores for students' attitudes to and musical perception of Luogudianzi after the three exposures to the Luogudianzi were not significantly different, and those for

the students who scored 4 or below after Exposure 1 were not significantly different either. Therefore, there is insufficient evidence in this study to conclude that repeated listening affects students' attitudes to, and musical perception of, Luogudianzi.

To conclude, the hypotheses for Experiment 1 (Teaching sequence), Experiment 3 (Students' control over music activities or 'framing') and Experiment 4 (Repeated listening) were rejected. Only the hypothesis for Experiment 2 (Proportion of teaching time devoted giving information and to providing musical experience) was accepted, though perhaps not in the way expected. Discussions of the findings, as well as implications and conclusions of the study follow in the next chapter.

Chapter 5

Discussion of Findings & Implications

Introduction

In this chapter, I briefly restate the purpose of this study, outlining the music context of Hong Kong schools and the Hong Kong community. I then summarize the concept of personal knowledge of music central to this thesis, and list the teaching variables which seemed likely to be involved in developing a personal knowledge of music. I then give an overview of the whole fieldwork project. Following this, I discuss the findings, their implications and their limitations.

5.1 The cultural and conceptual context of the study

As described above, since 1997, music teachers in Hong Kong have been required to pay more attention to various forms of traditional Chinese music. The notion of cultivating an interest in Chinese culture among young people has been emphasized by the Hong Kong community and shared among music professionals (Brand, 1999; Cham-Lai, 1999; Leung, 2002; Tung, 2000). Teaching traditional Chinese music at school has been seen as a means to cultivate an interest in Chinese culture. However, implementing the teaching of Chinese music in schools has added an additional dimension to the Hong Kong music curriculum. Music teachers have complained that there is already a considerable amount of material on Western classical traditions to be taught; the new emphasis on Chinese music has thus caused a congestion of musical knowledge. Teachers have claimed that they do not have enough time to cover the suggested curriculum.

Furthermore, problems have arisen concerning the musical experience and the training of teachers, which usually have little, if any, Chinese music content. It was thought that the provision of Chinese music materials on CD-ROM and the organization of workshops and seminars on

Chinese music would prove helpful for teachers in teaching Chinese music. However, research findings have indicated that Hong Kong students are not particularly interested in Chinese music (Cham-Lai, 1999; Fung, 1999/2000; Leung, 2002). The intention to transmit a propositional knowledge of Chinese music, rather than to enable the students to acquire a personal knowledge of Chinese music, has been evident from the emphasis on 'knowledge-that' in the part of the music syllabus dealing with Chinese music (see Chapter 1). So I was concerned to formulate an effective teaching strategy that would result in a personal knowledge of Chinese traditional music.

The review of the literature dealing with the concept of musical knowledge revealed the importance of an 'acquaintance' type of knowledge in the understanding of music (Reid, 1986). Reid (1986) defined acquaintance knowledge of music as a personal knowledge of music, resulting from direct contact or acquaintance with music. It is something more than the intuitive appreciation of music. It is an accumulation of knowledge-experience. A personal knowledge of music should be acquired by means of an adequate cognitive grasp of its object. A cognitive grasp includes three inseparable and interrelated components, known as cognition, conation, and feelings. These three components exist and work as one while people are thinking cognitively. They are 'inseparable aspects or facets of conscious life' (Reid, 1986, p.23). For example, when one is thinking, firstly, there must be an object in mind for a person to think of, secondly, one has to be motivated to continue to think, and thirdly, one has to have some interest in the things being thought of. So, a cognitive grasp of music enables a person to have acquaintance with the music, and think cognitively. An adequate cognitive grasp of music facilitates a person to acquire a personal knowledge of music (See Chapter 1). Besides, cognitive occurrences and cognitive experiences are essential to the acquisition of a personal knowledge of music.

Reid (1986) asserted that people should be exposed to music often. Musical experiences received have to be renewed, fresh and cognitive. So, repeated occurrences are not just flat repetitions but are carefully arranged

and renewed repetitions, which are believed to be important in the acquisition of a personal knowledge of music.

Wholehearted individual participation is helpful in the acquisition of musical experiences. A propositional knowledge of music alone is insufficient to facilitate a comprehensive and personal understanding of music.

The review of the literature on the teaching of Chinese music revealed the approaches that have been taken in the teaching of Chinese music. Four teaching variables likely to affect the acquisition of a personal knowledge of music emerged from the literature on the teaching of Chinese music: (a) teaching sequence; (b) the relative proportion of teaching time devoted to giving information and to providing musical experience; (c) students' control over music activities or 'framing', and (d) repeated listening rather than one-off listening. These teaching variables were seen as likely to affect the extent to which a personal knowledge of the taught music would be acquired in the classroom setting. The manipulation of these teaching variables over a specific period of time might therefore be able to tell us something about the students' acquisition of a personal knowledge of Chinese music.

First, I designed the testing of the four teaching variables to tell whether each of the variables helped to develop a personal knowledge of music in a classroom setting. Each variable was tested separately. Each experiment involved three to six lessons on "Chinese non-melodic percussion instruments and the Luogudianzi used in Beijing opera". The duration of each experiment gave the students the chance to accumulate knowledge-experience. The various musical activities provided them with the opportunity to acquire a personal knowledge of music.

I assumed that manipulation of the four teaching variables would alter the level of personal knowledge, as the exposure to the music varied for the two treatment groups. For Teaching Variable A, Teaching Sequence, it was assumed that exposure to music before information would draw

students' attention to music as a source of affective and cognitive information in itself. The provision of information after the music might then reinforce the music that students had experienced, leading to a stronger understanding of the music. In testing Variable B, Proportions of Teaching Time Devoted to Giving Information and to Providing Musical Experience, it was thought that personal knowledge of music would be acquired from the additional time given to listening to the music. It was assumed that more time given to musical experience in listening would build personal knowledge of music.

In testing Variable C, Students' Control over Music Activities or 'Framing', it was assumed that giving the students greater autonomy to control the use of the Luogudianzi, would enable them to be well acquainted with the music and so have increased personal knowledge of the music.

In testing Variable D, Repeated Listening rather than One-Off Listening, it was thought that students would understand the music better if they had the freedom to control their contact with it. They would come to understand the music when they listened to it more than once. Information would not be necessary for better understanding of the music.

The research was designed to answer the overall research question: "To what extent do the four variables, (a) teaching sequence (giving information or providing musical experience first), (b) the proportion of teaching time devoted to giving information and providing musical experience, (c) the level of students' control over music activities, or 'framing', and (d) repeated listening rather than one-off listening, identified from the literature on teaching Chinese music, lead students to develop a personal knowledge of the part of Chinese traditional music called Luogudianzi".

5.2 Summaries of the four experiments

Before proceeding to a discussion of the fieldwork findings, I summarize the four experiments that make up the research project. The

summary includes the setting up of the four hypotheses to be tested in the four experiments, the interviews that followed Experiments 1, 2 and 3, and the design of the four experiments that presented in four tables separately.

5.2.1 A summary of the Hypotheses of the four experiments

As the research was designed to see the extent to which students' personal knowledge of music could be enhanced by any of the four teaching strategies, I developed experiments to test each teaching variable separately. The four hypotheses tested in the four experiments are detailed below.

1. **The "sequence" hypothesis**

   Music experience and music information provided in different sequences will have a different effect on students' attitudes towards traditional Chinese music and their understanding of that music.

2. **The "proportion-of-teaching-time" hypothesis**

   Teaching music using different proportions of information and direct experience will have a different effect on students' attitudes toward traditional Chinese music and their understanding of that music.

3. **The "instructional-framing" hypothesis**

   The level of instructional framing, that is, the degree of student autonomy allowed in music activities, will affect students' attitudes towards traditional Chinese music and their understanding of that music.

4. **The "Repeated-listening" hypothesis**

   Repeated listening will affect students' attitudes towards traditional Chinese music and their perception of that music.

5.2.2 A summary of the follow-up of the four experiments

I also wanted to know what (a) the students, (b) the teachers thought about their experience of the different teaching approaches to presenting Luogudianzi, and (c) if there were any extraneous factors affecting the development of students' personal knowledge of music. So, after testing the hypotheses in classroom settings, I set out to answer three subsidiary questions by interviewing students and the regular teacher of the

experiments. The three questions were:

1. What did students in various groups think of their experience of Luogudianzi?
2. What did teacher think about the two different teaching approaches?
3. To what extent did extraneous factors seem to affect personal knowledge of traditional Chinese music?

5.2.3 A summary of the design of the four experiments

The design of the experiments that tested Hypotheses 1, 2 and 3 was similar but the design for testing Hypothesis 4 was different.

For Experiment 1, 2 and 3 there were two treatment groups. Each group consisted of two randomly selected classes of students, matched in terms of age, gender, and academic results. A unit of Chinese traditional music called "The Chinese non-melodic percussion instruments and Beijing opera Luogudianzi" was taught by the researcher and the regular teacher of the schools of the experiments. The researcher and the regular teacher each taught one class from each treatment group. This arrangement made it possible to check whether the teacher was a factor affecting students' attitudes towards Luogudianzi.

Experiment 4 had a separate design. There was no instruction required. Students listened to the music three times at weekly intervals.

Data on students' attitudes towards and musical understanding of the Luogudianzi were collected by asking students to complete a questionnaire before and after the treatments for each experiment. An item testing students' perception of Luogudianzi was added in the questionnaire for Experiment 3. In this item, pairs of bipolar adjectives of Semantic Differential Scales were used to reveal students' attitudes and perception of the music. I compared data from the questionnaires administered after Treatment 1, with similar data from the questionnaires administered after Treatment 2 to see if there was support for the hypotheses in the first three

experiments.

For Experiment 4, I compared data from the questionnaires, (students' attitudes towards and the perception of the Luogudianzi) administered after each exposure (listen to the Luogudianzi) three times at weekly intervals, to see if there was support for the hypotheses of Experiment 4.

Semi-structured interviews with students and the regular teacher of Experiments 1, 2 and 3 followed the last lesson of each experiment. The following tables summarize the structure of each experiment of the study. They are Figure 5-1, Figure 5-2, and Figure 5-3 and Figure 5-4 for Experiments 1, 2 3 and 4 respectively.

Figure 5-1: The structure of Experiment 1 testing the "Sequence hypothesis".

Experiment 1	The "Sequence" hypothesis
Subjects of Experiment 1	LKS School, 166 secondary two students
Treatment	Treatment 1: Information after music experience Treatment 2: Information before music experience
Source of data of personal knowledge of music	1. A questionnaire comprised of: a) An attitude inventory; and b) Open questions and written responses on musical understanding items 2. Interviews with the students and the regular teacher that followed the learning experience. a) Students' responses to the two teaching approaches b) Regular teacher's observations of the two teaching approaches
Data collection	1. Complete the questionnaire of Experiment 1 2. Individual semi-structured interview with students and the teacher conducted after the last lesson of the experiment
Data processing	1. Written responses on musical understanding a) Four student helpers assessed all the written responses to the questionnaire items of musical understanding once. b) They used the eight levels of Audience-Listening criteria developed by Silva (1998) to assess students' written responses on understanding of the music c) The eight levels of the Audience-Listening Criteria were combined into four for use in assessing the level of musical understanding that the students had attained: • Level 1 and 2 were combined into one level called 'Materials': this level assessed students' awareness to the materials or the physical elements of the music, such as sound quality and effect and the speed of the music. • Level 3 and 4 were combined into one level called 'Expression': this level assessed students' awareness of the

Experiment 1	The "Sequence" hypothesis
	relationship between sound and expression. Is the student aware that sound quality, rhythm, metric organization, specific rhythmic features and so on affect the expressiveness of a piece of music? • Level 5 and 6 were combined into one level called 'Form': this level assessed students' awareness of perception and comprehension of the musical form, clear structural relationships and stylistic context. • Level 7 and 8 were combined into one level called 'Value': this level expected students to state how musical materials are manipulated musically, structurally and technically for specific musical features. d) They gave a final level to the musical understanding of every piece of written work. If the student helpers did not agree on the level, the researcher made the final decision. e) After that, they coded the levels of musical understanding that students had attained into numerical form as follows: • 1 for the level of 'Materials, • 2 for the level of 'Expression, • 3 for level of 'Form' and • 4 for the level of Value'. 2. Attitude towards the Luogudianzi a) The same four student helpers each coded all the questionnaire items that tested students' attitude towards to the music once. b) Data of the attitude inventory in a five-point Likert Scale was converted into numerical form as follows: • 1 for 'For strongly disagree' • 2 for 'Disagree' • 3 for 'Agree' • 4 for 'Quite agree' and 3. 5 for 'Strongly agree'
Analysis of data	1. Students' attitude towards the Luogudianzi • An ANOVA with repeated measures was used to determine whether there was a change in the students' attitudes towards the Luogudianzi used in Beijing opera under the considerations of (a) Treatments of variable 'teaching sequence': Treatment 1 (music information after musical experience); Treatment 2 (music information before musical experience), (b) teacher who taught the lessons: the researcher; the regular teacher at LKS School (S), and (c) time: after treatments. I compared the mean score for the attitude scores collected in the questionnaire. 2. Students' musical understanding of the Luogudianzi. • The Friedman Test, a non-parametric test for ordinal scales on repeated samples was used to analyse the results of the change in the students' musical understanding of Luogudianzi 3. Analysed interview data collected form the students and the regular teacher.

Figure 5-2: The structure of Experiment 2 testing the "proportion-of-teaching-time hypothesis".

Experiment 2	The "proportion-of-teaching-time" hypothesis
Subjects of Experiment 2	LTP School, 165 secondary one students
Treatment	Treatment 1: more time for musical experience than for hearing information about Luogudianzi Treatment 2: less time for musical experience than for hearing information about Luogudianzi
Source of data of personal knowledge of music	1. A questionnaire comprised of: a) An attitude inventory; and b) Open questions of written responses on musical understanding items 2. Interview with the students and the regular teacher that follow up the learning experience of the music. a) Responses of the students of the two teaching approaches b) Regular teachers observations
Data collection	1. Complete the questionnaire of Experiment 2. 2. Group semi-structured interviews with the students and interview with the regular teacher conducted after the last lesson of the experiment
Data processing	1. Written responses on musical understanding I repeated the process used in Experiment 1 2. Attitude towards the Luogudianzi a) The four-pint Likert Scale was converted into 4 numerical forms instead of 5. They are as follows: • 1 for 'For strongly disagree' • 2 for 'Disagree' • 3 for 'Agree' and • 4 for 'Strongly agree '.
Analysis of data	The same as for Experiment 1

Figure 5-3: The structure of Experiment 3 testing the "Students' control over music activities of 'framing".

Experiment 3	The "instructional-framing" hypothesis
Subjects of Experiment 2	LTP School, 171 secondary one students
Treatment	Treatment 1: students had more control over music activities. Treatment 2: students had less students' control over music activities.
Source of data of personal knowledge of music	1. A questionnaire comprising: a) An attitude inventory; b) Asking students to give a written description of music in detail to show their musical understanding, b) Pairs of bi-polar adjectives to test students' musical perception of Luogudianzi. 2. Interview with the students and the regular teacher that follow up the learning experience of the music. 1. Responses of the students to the two teaching approaches 2. Regular teacher's observations
Data processing	1. Written responses on musical understanding • I repeated the process used in Experiment 1 2. Attitude towards the Luogudianzi • I repeated the process used in Experiment 2. 3. Musical perception • A value of 1-to 7 was given to the pairs of adjectives • The pairs of adjectives were reversed with the 'positive' ends being accorded the large number on the 7-point sale.
Data collection	1. Complete the questionnaire of Experiment 3 2. Individual semi-structured student interview conducted after the last lesson of the experiment 3.
Analysis of data	The same as for Experiment 1

Figure 5-4: The structure of Experiment 4 testing the "Repeated-listening rather than one-off listening" hypothesis

Experiment 4	The "Repeated-listening rather than one-off listening" hypothesis
Subjects of Experiment 2	LTP School, 193 secondary one students
Treatment	Listened to the series of Luogudianzi three times at weekly interval..
Source of data of personal knowledge of music	1. A questionnaire comprised of: a) An attitude inventory; and b) Pairs of bi-polar adjectives to test students' musical perception of Luogudianzi.
Data collection	1. Complete the questionnaire of Experiment 3 three times after each exposure to the music • After Exposure 1 • After Exposure 2 • After Exposure 3
Data processing	1. Attitudes to and musical perception of Luogudianzi • Four student helpers each coded all the questionnaire items once • A value of 1-to 7 was given to the pairs of adjectives • The pairs of adjectives were reversed with the 'positive' ends being accorded the large number on the 7-point sale.
Analysis of data	1. Students' attitudes to and musical perception of Luogudianzi a) A t-test to compare three sets of scores: 1) the attitude scores for Exposure 1 and Exposure 2, 2) the attitude scores for Exposure 2 and Exposure 3, and 3) the attitude scores for Exposure 1 and Exposure 3. b) A t-test to compare three sets of scores: 1) the perception scores for Exposure 1 and Exposure 2, 2) the perception scores for Exposure 2 and Exposure 3, and 3) the perception scores for Exposure 1 and Exposure 3, for the five pairs of adjective items of questionnaire Item 2, that tested students' musical perception of Luogudianzi. 2. Students' attitudes to and musical perception of Luogudianzi for students who scored 4 or below after Exposure 1 (to see if they were able to offer a more emphatic rating on attitudes to and musical perception of Luogudianzi, after Exposure 2) a) A t-test to compare three sets of scores: 1) the attitude scores for Exposure 1 and Exposure 2, 2) the attitude scores for Exposure 2 and Exposure 3, and 3) the attitude scores for Exposure 1 and Exposure 3, for students who scored 4 or below after Exposure1. b) A t-test to compare three sets of scores: 1) the perception scores for Exposure 1 and Exposure 2, 2) the perception scores for Exposure 2 and Exposure 3, and 3) the perception scores for Exposure 1 and Exposure 3, for the five pairs of adjective items of questionnaire Item 2, that tested students' musical perception of Luogudianzi, for students who scored 4 or below after Exposure1.

5.3 Discussion of the unexpected findings of the experiments

In the findings for the four experiments, only the hypothesis for Experiment 2 was supported. There were no significant changes for students' musical understanding and attitude towards the Luogudianzi between the students of the two treatment groups in Experiments 1, 2 and 3. The unexpected findings of Experiment 1, 2 and 3 are discussed in the following.

5.3.1 Explanation of the unexpected findings for Experiment 1

Statistically, it appeared that the different teaching sequences used in Treatment 1 and Treatment 2 had no effect on the students' attitudes towards and the musical understanding of Luogudianzi. The reasons are likely to be as follows:

Inappropriate assumption

The first assumption of Experiment 1 was that exposure to music before information would draw students' attention to the music as a source of affective and cognitive information. The second assumption was that the provision of information after the music would reinforce the music that students had heard, and lead to a better understanding of the music. According to the observation of the teachers and the interview data collected from the students of the two treatment groups, the students came to know about and show interest in the Luogudianzi because of the musical experience they had in the lessons, that is, the playing of the instruments and the Luogudianzi *Jijifeng*. Most of the students seemed not to care whether the musical experience of the Luogudianzi took place prior to or after the acquiring of information about those instruments. Nor did it matter if they were playing the instruments as instructed by the teacher or in their own way. They enjoyed the practical experience of playing the instruments and the Luogudianzi- *Jijifeng* - in the two treatment groups. The students were motivated. Both groups reported that the practical experience of playing the Luogudianzi with the instruments was a good musical experience, though the students involved in Treatment 1 had more freedom to explore the instruments. Students who had Treatment 1 (information after music

experience) were more receptive to the sound of the instruments by the end of the four lessons, although some of them still did not find it particularly pleasant. Furthermore, the use of audio-visual aids, such as video clips and CD-ROMs to assess information of Luogudianzi aroused students' interest. The regular teacher confirmed that information about Luogudianzi prepared the students effectively for this new area of learning.

It seems that it did not matter whether the information was presented before or after the musical experience. The crucial thing was that the students of the two treatment groups had an adequate cognitive grasp of its object – the Luogudianzi and information about it, asserted by Reid (1986), but the manipulation (involving music before information for one treatment group and music after the information for the other treatment group) made no difference to attitudes to and understanding of the Luogudianzi for the two treatments. The manipulation of the teaching strategy seemed to make no difference, because, at different times of the lessons, each treatment group had the same fundamental experience of and information about the Luogudianzi. It seems that the personal knowledge of Luogudianzi may have been the same for the two treatment groups, and so there was no statistically significant difference in the students' attitudes towards and the musical understanding of the Luogudianzi. The evidence seems to support the theory of personal knowledge of music, but provides no support for the view that manipulation of the sequence of students' experience of music and information about the music is important.

Noise Nuisance and Classroom Setting Constraints

The classroom setting may be another factor that led to the unexpected outcome for Experiment 1. The layout of the classroom for Treatment 1 formed an invisible communication barrier between the teacher and the students. Over forty students were crowded into a long, rectangular classroom. There were no passages between the rows of seats to enable the teacher to come close to them. The teaching platform was the only area where the teacher could move about. The teacher could hardly exercise control or effectively supervise practical work when students were experiencing the instruments and the *Jijifeng* in Treatment 1.

The situation in Treatment 2 was no better due to a similar classroom layout. It was also very noisy. The sound of Luogudianzi and the instruments used were noisy. The students did not play the instruments properly and others found this a nuisance. A lot of disturbance arose, and the students' impressions of the instruments and the Luogudianzi were negatively affected. It seemed that students' attitudes towards the Luogudianzi of the two treatment groups seemed largely influenced by the impressions they had about the Luogudianzi while they were experimenting with the sound of the Luogudianzi rather than when they listened to the music before or after the information.

This also suggests that the questionnaire items, designed to measure students' attitudes and understanding under the two treatment conditions, failed to distinguish the effect of the two treatment conditions because, in this experiment, the two treatment conditions, at least as experienced by the students, were not different.

The music Luogudianzi

Responses to the questionnaire showed that students in the two treatment groups attended to the sound quality and speed of the music, or the 'materials' of the Luogudianzi. Such responses may have been partly determined by the particular musical characteristics of the Luogudianzi.

Although the collection of Luogudianzi is enormous, Luogudianzi have just a few standardized patterns. The rhythmic patterns and structure of the Luogudianzi vary little. They are made up of very short and similar rhythmic patterns forming longer episodes. The sounds of the different Luogudianzi are basically performed by beating the *daluo*, *bo* and *xiaoluo* with different degrees of softness and hardness. They might all sound very similar to an audience, in view of the sounds and timbre of the instruments and the structure of the Luogudianzi (Zhang, 1958, p. 307). Furthermore, the most important musical features of Luogudianzi, dynamic contrasts and changes in the speed of the rhythmic patterns, seem to be at the levels of sound materials and expression, although they do help to intensify and

reinforce the atmospheric settings, and emphasize and depict the emotional changes of the artists (Zhang, 1958, Lu, 1991, Liu, 1999). Thus, the musical characteristics of the Luogudianzi used in Beijing opera appear to relate specifically to sound materials and expression. This may be why the students' musical understanding in the two treatment groups was found at these levels. The understanding of the Luogudianzi that students had, seemed to be basically the same, whichever treatment they experienced. Having information prior to or after the experience of music made no difference. The treatment was not the critical factor; it was more likely to have been the particular kind of music they experienced.

The measuring instruments

Although data from students' interviews and from the teachers' comments revealed the effects of the teaching approaches, the questionnaire items used to test students' attitudes and understanding after each of the two treatments may not have been sensitive enough to pick up students' changes in attitudes towards and musical understanding of the Luogudianzi. The regular teacher observed that students were highly motivated by the treatment that presented information after the musical experience. The students' interview data also confirmed that students found the Luogudianzi was very valuable, powerful and expressive. They were getting to like the music, and their understanding of the music was not confined to the sound quality or 'materials' of the music. However, the statistical findings of the questionnaire showed that the differences in the scores of attitude towards, and the understanding of, Luogudianzi, between the students in the two treatment groups were not significant.

The explanation may be that the students' musical understanding of the music was mostly in the 'materials' of the music, or that the students were not fond of providing written responses about music appraisal in the questionnaire. They provided sketchy responses to the items in the questionnaire. So, the instrument of the measurement, asking students to give written responses on their musical understanding of the music, may not have reflected differences in understanding that were apparent from the interviews and the teacher's observation.

5.3.2 Explanations of the unexpected findings for Experiment 3

As Experiment 2 produced the finding that was hypothesized, this discussion of unexpected findings moves to Experiment 3.

Experiment 3 tested whether having a different degree of autonomy (or 'framing') made a difference to students' attitudes towards and musical understanding of the Luogudianzi. Analysis of the questionnaire responses showed no significant difference between the two treatment conditions (more autonomy versus less autonomy) for either attitude towards or understanding of the Luogudianzi.

The design of music activities

It is possible that the two treatments in Experiment 3 did not produce significantly different results, because the difference in student control of their own activities was not great enough. The amount of autonomy that students had in using the Luogudianzi in Treatment 1 (more student control over music activities) was not different enough from the amount of control they had in Treatment 2 (less student control over music activities) to produce the outcome expected in Experiment 3. For example, in the composition of Luogudianzi, the students in Treatment 1 (those who had more student control over music activities), who were supposed to have more autonomy in deciding how to use the Luogudianzi, did not have much freedom to do so. What they were allowed to do was to incorporate the *Sibainyiji, Chongtou, Matui* or *Niusi* that they had learnt into the new one they composed to accompany the scenario they had planned. The Treatment 2 students (those who had less student control over music activities), on the other hand, composed Luogudianzi by combining, repeating and rearranging the order of *Sibianyiji, Chongtou, Matui* or *Niusi*. It seemed that the degree of freedom to use the Luogudianzi between the two treatment groups was not very different. Another example was the examination of the musical features of the Luogudianzi in the two treatment groups. In both groups, the teacher guided the students to examine the features and to sum up the musical characteristics. There did not appear to be a high degree of student autonomy exhibited by either treatment group. The design of the music

activities might not have produced different degrees of student autonomy. However, the music activities mentioned above were made in consideration of the particular characteristics of Hong Kong's school contexts. In Hong Kong, music teachers are extremely concerned with classroom discipline. Their priority is to keep the class quiet, and not to disturb classes in nearby classrooms. They may prefer to have full control over their classes. Allowing students a high degree of autonomy in music lessons - for example, leaving them free to compose or to play the Luogudianzi - could result in a chaotic, uncontrollable classroom situation, which the regular teacher of the LTP school might have been keen to avoid. Furthermore, the complaints about the noise of the Luogudianzi which had been received during Experiment 1 reinforced concerns about the particular context of Hong Kong schools. Under such constraints, the difference in the degree of student autonomy in using Luogudianzi between the two treatment groups was not great. The difference in students' attitudes to, and musical understanding of, the Luogudianzi as derived from a comparison between the two treatment groups was not, therefore, significant.

Inappropriateness of the measuring instrument

The unexpected outcome of Experiment 3 may also have been caused by the insensitivity of the instruments of measurement - the questionnaire. The regular teacher of Experiment 2 and 3 confirmed that students were not fond of providing written appraisals of music, as in the questionnaire. He was sure that the students were able to have the images in their mind when they were listening to the music, but, they were not able to analyse the music. They were not patient enough to write about music they heard. So, the instrument of the measurement, asking students to give written responses to their musical understanding of the music, may not have picked up any changes that occurred.

5.3.3 Explanation of the unexpected findings for Experiment 4

The unexpected outcomes of Experiment 4 may have been due to the inappropriate assumption testing Variable D, Repeated Listening rather than One-Off Listening. It was thought that students would understand the music better if they had the freedom to control their contact with it. They would

come to understand the music when they listened to it more than once. Information would not be necessary for better understanding of the music.

According to some experts, Luogudianzi can be ear-splitting and strident (Zhang, 1958 p.307), and simply too loud (Zhang, 1958, 劉吉典, 1999). The rhythmic patterns and structure of the Luogudianzi are not varied. The sounds of the different Luogudianzi are basically performed by beating the *daluo*, *bo* and *xiaoluo* with different degrees of softness and hardness. They may sound very similar to an audience (Zhang, 1958, p. 307).

The beauty of Luogudianzi can perhaps be appreciated only when it goes with the acting. For example, when the Luogudianzi gets fast and loud, it represents a fighting scene or people getting disturbed or excited. It is hard for people to understand the Luogudianzi without background knowledge about the Luogudianzi. It is therefore not surprising that repeated listening did not help students to understand or appreciate the music. They did not have this information about Luogudianzi.

In contrast, the music used in a similar experiment by Swanwick (1994) was an excerpt from Elgar's symphonic piece, *In the South*. It is a western symphonic piece of music with melodies played by different orchestral instruments. The timbre and musical texture such as melodies and form of the music are entirely different from the Luogudianzi. It is therefore possible that outcome of the experiment by Swanwick (1994) was different from the outcome of Experiment 4 of my study, because the kinds of music used in each experiment were fundamentally different.

5.4 The lessons I learnt from my study

The fact that only one hypothesis out of four in my study was supported prompted me to re-examine Reid's theory of a personal knowledge of music and to consider reasons that may have led to the unexpected outcomes in my experiments. These could be as follows:

Incomplete authentic experience of Luogudianzi

According to Reid (1986), the acquisition of a personal knowledge of music is closely related to an adequate grasp of the cognitive experiences that a person has. However, it seems that the experience of Luogudianzi that students had in my experiments that tested (a) different teaching sequence, (b) different proportions of information and direct musical experience and (c) different degrees of autonomy in the use, may not have provided this "adequate grasp of cognitive experience". Students may have missed out on the authentic experience of the Luogudianzi, that is, the miming together with the Luogudianzi, which is supposed to be crucial for an adequate cognitive experience of Luogudianzi. Students experienced the Luogudianzi only through the audio-visual materials and playing of the Luogudianzi. They watched the video clips that demonstrated the Luogudianzi together with the miming but they did not experience the Luogudianzi by playing the Luogudianzi and doing the miming together, which is supposed to be the essence of the art. Zhang (Zhang, 1958) claimed that the combination of miming and Luogudianzi is the essence of the art of Luogudianzi. He asserted that the features and functions of Luogudianzi can only be fully demonstrated and experienced in conjunction with the acting, that is, the miming. Zhang (Zhang, 1958) added that if the Luogudianzi were appreciated along with the actions of the artists on stage, people would not feel that they were loud and noisy. An audience would be able to observe and appreciate how the miming was being intensified or highlighted by the Luogudianzi. For example, the series of Luogudianzi went perfectly well with the stylized miming *Qiba* or 'freeze' (Zhang, 1958, p.347). The musical experience of Luogudianzi that the students had thus may have been inadequate in terms of authenticity and cultural context. The cognitive experience that the students had may not have been adequate and authentic enough to bring about a personal knowledge of Luogudianzi.

Repeated experiences

With regard to the acquisition of personal knowledge of music, Reid (1986) asserted that repeated experiences are fundamental to the acquisition of a personal knowledge of music. He pointed out that the vast musical knowledge of experienced musicians was the accumulation of years of

repeated musical experiences. He commented that these musical experiences are:

> "fused and relevantly transformed, ready to be called into new occurrent operations in the performing, or hearing, of the music they know. And this is not just a flat repetition of dispositionally established fact" (Reid, 1986, p.46).

However, the students in this study had no stock of experiences of Luogudianzi or of Beijing opera to recall or to transform into "new occurrent operations", when they were exposed to the Luogudianzi in the lessons. The interventions in the experiments of my study were short. A number of three to six lessons may not have lasted long enough to bring about sufficient personal experience. The kind of exposure of Luogudianzi that the students received in the lessons, such as watching and listening to audio-visual materials, was not powerful enough to bring about the required cognitive experiences or to have much of an impact on them.

Moreover, students had not had a great deal of exposure to this particular genre of music. The general context of Chinese music in Hong Kong, both in the community and in schools, is not conducive to encouraging changes in students' attitudes towards Chinese traditional music. This is partly because the promotion of traditional Chinese music in the community and at school has been begun only since 1997. As described in Chapter One, the school environment for Chinese music is not as well developed as Western music in terms of materials and in the attitudes of teachers (Ho, 1996; Cham-Lai, 1999; Leung, 2004). There has been less teaching of Chinese music undertaken by music teachers (Leung, 2004), fewer entries and participants playing Chinese music at the Hong Kong Speech and Music Festival (Brand, 1999), and therefore less inclination on the part of both students and parents for students to learn Chinese instruments (Leung, 2002). Furthermore, Canto pop and Western music, not Chinese opera, seem to make up the main trend in young people's music. It might be, therefore, that none of the three teaching strategies, "teaching sequence", "students' control over music activities" or "repeated listening

rather than one-off listening", were able to produce the experiences of Luogudianzi that could inspire the students and to bring about changes in their attitude towards and understanding of the Luogudianzi. It will take time to establish in schools and the community a culture of Chinese music that might allow the acquisition of a personal knowledge of Chinese music.

Insights I gained from the study

My study did not succeed in proving that the four tested teaching strategies were able to help in the acquisition of a personal knowledge of Chinese music. Therefore it is difficult to draw out implications for music teaching. However, some of my observations from the study maybe helpful for people in the field of music education, especially, Hong Kong. They are as follows:

Facilitation of the repeated cognitive experience

The physical setting and small size of classrooms and the large number of students in each class are likely to work against teachers trying any new teaching approaches. Teachers seem to prefer the guarantee of classroom control to having students acquire a personal knowledge of music. This echoes the comments of Ng (F. Y.-F. M. Ng, Paul, 1998), that music teachers in Hong Kong tend to pay more attention to classroom management than the intellectual and aesthetic needs of their students. It is important that teachers understand the importance of students acquiring a personal experience of music. It is also important that they appreciate that cognitive experience of music should not be confined to watching and listening to audio-visual materials, and extracts of aspects of Luogudianzi on CD-ROMs. The facilitation of repeated cognitive experiences should be varied to include activities such as playing, making up traditional or indeed any music and attending live performance of music at school or after school hours.

Teachers should also try every means to minimize the technical problems posed by the classroom settings, for example, by scheduling the lessons in bigger premises, such as the school hall or a covered playground, when students are involved in playing or making up traditional or indeed

any music.

Cognitive experience is also likely to be enhanced by arranging for students to attend live performances. Cham-Lai (1999) reported that students saw a live performance of Cantonese opera as highly accomplished. It made a great impression on those students. Attending live performances is likely to bring about a personal experience of traditional Chinese music. Authentic musical performances would then be inspired and acquired enabling the accumulation of cognitive current experiences of Luogudianzi and the Beijing opera for students.

Collaboration with artists

Teachers should try to work with experts or artists in the community to provide opportunities for students to experience authentic traditional Chinese music. It may be possible to set up authentic musical experiences, especially live performances and practice sessions with artists and experts. Students may then be able to have an adequate cognitive grasp of the Luogudianzi. A personal knowledge of Beijing opera Luogudianzi and Beijing opera may be acquired.

A good example of such collaborative work between artists and schoolteachers was the three-year Arts-in-Education (AiE) programme (http://www.hkadc.org.hk, last assesed 2004), first launched in 1997/98, which was funded by the Hong Kong Bank Foundation of HSBC, and organized by the Hong Kong Arts Development Council, the Education and Manpower Bureau, and the Hong Kong Institute of Education. Twenty three artists were invited to organize different types of activity in 16 schools, involving nearly 200 students, in the year 2001/02. Students learnt with and from the artists. In the following year, 2002/2003, the numbers of people involved had increased to more than 3,800 students, 260 teachers, 32 schools, and over 50 artists. This kind of collaboration between the teachers and the artists-at-schools can provide students with authentic musical experiences. It can also, to some extent, compensate for the limitations of teachers' lack of training in Chinese music.

Suggestions for future studies

In view of the above, it is worth investigating further the formulation of teaching strategies that might help students to acquire an 'acquaintance-knowledge' of Luogudianzi over a longer period, with the emphasis on the importance of authentic musical experience. Particular attention should be paid to the design of musical activities for cognitive experiences of the Luogudianzi. These might include: (a) live performances of the Luogudianzi with the miming performed by artists, and (b) practical music activities on the features of the Luogudianzi, that is, giving the students practical work on Luogudianzi together with the miming. Such an investigation might be part of a joint project for teachers with artists of Chinese opera and musicians of the Luogudianzi, so that the teacher can be supported by the highly professional playing skills and miming of the Luogudianzi of these professional artists. In addition, the design of measuring instruments has to be considered carefully. For example, asking student to appraise music by writing may not be appropriate. Also training in music appraisal may be necessary before any experiment.

Emphases on the 'acquaintance' type of knowledge of music

In the practice of music education, teachers may need to emphasize the central concept of the acquisition of a personal knowledge of music in teaching advocated by Reid, instead of putting too much stress on the acquisition of information about music. Teachers may need (a) to help students to have direct contact or acquaintance with music for an accumulation of knowledge-experience; (b) to provide students with opportunities for an adequate cognitive grasp of the music, so that their knowledge of music is not solely confined to propositional knowledge of music or 'knowledge-that' of music, (c) to make sure that repeated experiences of music are varied and renewed rather than flat repetitions, so that 'acquaintance' or personal knowledge of music can be acquired and accumulated by students.

Implications for music educators in Hong Kong arising from the research

I learnt in my research that the music experiences that students have acquired in music lessons are crucial to their attitude to music. My interview data showed that students' interests on Luogudianzi were aroused, whether they liked the music or not. It seems that the strategies and approaches a music teacher uses are likely to affect students' acquisition of musical understanding. As teachers design music activities for students, in particular in Chinese traditional music, they should pay attention to the cultural context. For example, in learning the Luogudianzi of Beijing opera, students should experience the miming together with the Luogudianzi so that the power of the Luogudianzi can be fully experienced, since Luogudianzi is closely tied up with miming. Students may not be able to have a comprehensive musical experience of Luogudianzi if they only play and compose Luogudianzi. Therefore, music teachers at schools need to be careful in providing music experience for students in particular of Chinese traditional music.

Furthermore, the learning targets "Developing Creativity and Imagination", "Developing Skills & Process", "Cultivating Critical Responses" and "Understanding Arts in Context" through Arts education (Council, 2002, 2003) introduced in the recent education reform are likely to require music teachers in Hong Kong to examine teaching approaches and strategies that allow students to have meaningful musical experience.

To conclude, this study (a) attempted to clarify the concept of musical knowledge; (b) identified and derived some main teaching variables from the literature review on approaches to teaching Chinese music, which might be influential in bringing about a personal knowledge of music. These teaching variables: (a) teaching sequence; (b) the proportions of time devoted to giving information and providing musical experience; (c) students' control over music activities or 'framing' and (d) repeated listening rather than one-off listening, which might influence the acquisition of a personal knowledge of music, were tested separately in the teaching of

traditional Chinese Luogudianzi. The statistical findings of the experiments revealed that only the Hypothesis of Experiment 2 was supported. It seems the unexpected outcomes of other experiments were due to inappropriate assumptions of the experiments, insensitive measuring instruments for Experiment 1 and 3, and the design of the activities which were not distinctive enough to bring about the different degree of students' control over music activities. Moreover, it is difficult to control these teaching variables to bring about an observable personal knowledge of the music, in this case of Luogudianzi, in classroom settings. However, according to the data collected in the students and teachers interview, there were some indications that practical activities, such as playing the instruments and the music and composing had acquainted the students well with the Luogudianzi, and had had an effect on the students' personal knowledge of the music. The students found they perceived the Luogudianzi differently after these musical activities. Some came to appreciate the Luogudianzi. It is not clear whether the effects would have been stronger, if all the four strategies were used at the same time. My hope is this study may have aroused the interest of other researchers in investigating ways of acquiring a personal knowledge of music by carrying out research on providing adequate cognitive experiences for the acquisition of personal knowledge of music, for example, providing (a) live performances of the Luogudianzi with the miming performed by artists, (b) practical music activities related to the features of the Luogudianzi, that is, giving the students practical work on Luogudianzi together with the miming, for the acquaintances of the music, Luogudianzi used in Beijing opera, and (c) a more radical reform of the teaching and learning environment than was possible during this study; a change of classroom culture.

Table of Appendices

Appendix A: A Record of Sound Explorations of Chinese Non-melodic Percussion Instruments for students in the teaching of treatment 1 for variables 1, 2 and 3

聲音探索紀錄

A Record of Sound Exploration

樂器 Instruments	演奏方法探索 Exploration of playing techniques and the execution of sound		音響效果 Sound difference
	(i) 演奏方式 Manner of playing	(ii) 敲打位置 The position of the instrument being played upon with	
 大鑼 Daluo			
 鈸 Ba			
 小鑼 xialuo			
 板鼓 bangu  沙的 Sadi		 	

Appendix B: Listening Chart for Lesson 2 of Treatment 1 of variable 2

Lesson two Listening Chart

(第二課音樂聆聽圖表)

What associations do these changes produce in your mind? 這音樂選段有沒有變化？這些音樂的變化可有引起你聯想到什麼？如果有，這些音樂的變化是如何使你有這樣的聯想？

Your associations or images（聯想到的情境）	Changes in the Music: for example, instruments, speed or tempo, rhythm, dynamics, repetition, etc. 音樂的變化如音樂結構（如重覆、對比）、樂器、速度、拍子、節奏、聲量等。

Appendix C: Listening Chart for Lesson 3 of Treatment 1 of variable 2

Lesson Three Listening Chart
(第三課音樂聆聽圖表)

Musical Extracts （音樂選段）	Things to look for （留意重點）	Changes in the Music: for example, instruments, speed or tempo, rhythm, dynamics, repetition, etc. 音樂的變化如音樂結構（如重覆、對比、樂器、速度、拍子、節奏、聲量等。）
1	**Characters（人物）**	
2	**Contexts, emotions, atmosphere （情境、情緒、氣氛）**	
3	**Contexts, emotions, atmosphere （情境、情緒、氣氛）**	
4	**Contexts, emotions, atmosphere （情境、情緒、氣氛）**	

Appendix D: Questionnaire of variable one: Teaching Sequence

Student no. 學號：_____ Sex 性別：□Male 男 □ Female 女

Age 年齡：□11-12 □13-14 □15-16

	極不同意 Strongly disagree	不同意 Disagree	同意 Agree	頗同意 Quite agree	極同意 Strongly agree
1. 當我聽到這音樂選段時，我會繼續聽。 1. When I hear the music, I want to continue listening					
1.2 當我聽到這音樂選段時，我會繼續聽。這是因為… … 1.2 When I hear the music, I want to continue listening because…					
2. 這音樂選段能引起我的聯想。 2. When I hear the music, something come into my mind	極不同意 Strongly disagree	不同意 Disagree	同意 Agree	頗同意 Quite agree	極同意 Strongly agree
第一段音樂選段。 a) the first music excerpt					
你聯想到什麼？從那裏引起聯想？（試從聲量、節奏、旋律、樂器類別、演奏技巧、曲式、結構、樂曲類別及風格、個人投入樂曲的程度等說明。） (a) What come in to your mind? What make you have such associations? (You may answer in accordance with the dynamics, rhythm, melody, instruments, performing skills, form, musical structure, genre, style, personal involvement and etc.)					
第二段音樂選段。 b) the second music excerpt	極不同意 Strongly disagree	不同意 Disagree	同意 Agree	頗同意 Quite agree	極同意 Strongly agree

	極不同意 Strongly disagree	不同意 Disagree	同意 Agree	頗同意 Quite agree	極同意 Strongly agree
聯想到什麼？從那裏引起聯想？（試從聲量、節奏、旋律、樂器類別、演奏技巧、曲式、結構、樂曲類別及風格、個人投入樂曲的程度等說明。） What come in to your mind? What make you have such associations? (You may answer in accordance with dynamics, rhythm, melody, instruments, performing skills, form, musical structure, genre, style, personal involvement and etc.)					

3. 我聽這音樂選段時有所發現。 3. When I listen to the music, I discover something	極不同意 Strongly disagree	不同意 Disagree	同意 Agree	頗同意 Quite agree	極同意 Strongly agree
它們是… …（試從聲量、節奏、旋律、樂器類別、演奏技巧、曲式、結構、樂曲類別及風格、對該樂段的看法等說明。） They are …(You may answer in accordance with dynamics, rhythm, melody, instruments, performing skills, form, musical structure, genre, style, personal involvement and etc.)					

4. 聽完這音樂選段後，我有所學習 4. I have learnt something after listening to the music	極不同意 Strongly disagree	不同意 Disagree	同意 Agree	頗同意 Quite agree	極同意 Strongly agree

	極不同意 Strongly disagree	不同意 Disagree	同意 Agree	頗同意 Quite agree	極同意 Strongly agree
它們是……（試從聲量、節奏、旋律、樂器類別、演奏技巧、曲式、結構、樂曲類別及風格、對該樂段的看法等說明。） They are …(You may answer in accordance with dynamics, rhythm, melody, instruments, performing skills, form, musical structure, genre, style, personal involvement and etc.)					

Appendix E

Questionnaire of variable two: Proportion of teaching time devoted to giving information and to providing musical experience

日期 Date：_____ 班級 Class:_____

學號 Student No. ：_____ 性別 Sex：□男 M □女 F

年齡 Age：□11-12 □13-14 □15-16

請在度量表中圈出適當的數字，表示你對以下句子的同意程度。1 表示「極不同意」；2 表示「不同意」；3 表示「同意」；4 表示「極為同意」。

Please circle a number in the 4-point scale to indicate how much you agree or disagree with the following statements. "1" means you strongly disagree; "2" means you disagree; "3" means you agree; and "4" means you strongly agree.

我樂意聆聽這音樂選段。 I am happy to listen to the piece of music.	1	2	3	4
(1a) 因為… … It is because…				
這音樂選段引起我的聯想。 The piece of music brought something to my mind.	1	2	3	4
(2a) 你聯想到什麼？ What came into you mind?				

(2b) 你認為音樂選段中，以下什麼東西使到你產生這樣的聯想？(可選擇多項)。

Of the piece of music, which of the following you think have caused the association in your mind? (You can choose more than one answer.)

□聲量 (請說明)
Dynamics (Please explain)

□節奏 (請說明)
Rhythm (Please explain)

□旋律 (請說明)
Melody (Please explain)

□樂器 (請說明)
Instruments (Please explain)

□演奏技巧 (請說明)
Performing skill (Please explain)

□音樂結構 (如重覆、對比) (請說明)
Musical structure (such as repetition, contrast) (Please explain)

□樂曲類型 (請說明)
Genre (Please explain)

□音樂風格 (請說明)
Instruments (Please explain)

個人投入樂曲程度（請說明） Personal involvement in the music (Please explain)					
□其他（請說明） Others (Please explain)					
聽完這選段後，我對音樂認識多了。 After listening to the piece, I know something more about music.	1	2	3	4	
(3a) 我學到的音樂知識包括（可選擇多項）： The things about music that I know more are (You can choose more than one answer) :					
□聲量（請說明） Dynamics (Please explain)					
□節奏（請說明） Rhythm (Please explain)					
□旋律（請說明） Melody (Please explain)					
□樂器（請說明） Instruments (Please explain)					
□演奏技巧（請說明） Performing skill (Please explain)					
□音樂結構（如重覆、對比）（請說明） Musical structure (such as repetition, contrast) (Please explain)					

□樂曲類型（請說明） Genre (Please explain)
□音樂風格（請說明） Style (Please explain)
□其他（請說明） Others (Please explain)

Appendix F

Questionnaire of variable three: The student level of autonomy on music activities or 'framing' part I

Date: 15-11-2001 **Class:_____** **Student no.: _____**

Sex: □Male □Female **Age: □11-12 □13-14 □15-16**

Listen to the music. When it has finished, make your response by putting a tick in one of the spaces somewhere between each of the two extremes. (You will put nine ticks in all).

Thick _____:_____:_____:_____:_____:_____:_____Thin

Varied_____:_____:_____:_____:_____:_____:_____All the same

Valuable_____:_____:_____:_____:_____:_____:_____Worthless

Simple_____:_____:_____:_____:_____:_____:_____Complex

Animated_____:_____:_____:_____:_____:_____:_____Lifeless

Dark_____:_____:_____:_____:_____:_____:_____Bright

Interesting_____:_____:_____:_____:_____:_____:_____Boring

Small_____:_____:_____:_____:_____:_____:_____Large

Like_____:_____:_____:_____:_____:_____:_____Dislike

Questionnaire of variable three: The student level of autonomy on music activities or 'framing' part II

Date:_____ **Class:**_____

Student no.: _____

Sex: □**Male** □**Female** **Age:** □**11-12** □**13-14** □**15-16**

Listen to the music. When it has finished, write what you heard to a deaf person. You may either write in English or Chinese.

Appendix G

Questionnaire of variable four: Repeated listening

日期 Date：_____ 班級 Class:_____
學號 Student No.：_____ 性別 Sex：□男 M □女 F
年齡 Age：□11-12 □13-14 □15-16

請在聆聽一組音樂片段後，回答以下的問題：
Please answer the following questions after you have listened to the group of music extracts.

1. 你喜歡這組音樂片段嗎？
我非常喜歡 ---; ---; ---; ---; ---; ---; --- 極不喜歡
1. How much do you like this group of music extracts?
I like very much ---; ---; ---; ---; ---; ---; ---dislike very much

2. 你對這組音樂片段有什麼感覺？
極不有趣 ---; ---; ---; ---; ---; ---; --- 非常有趣
甚有價值 ---; ---; ---; ---; ---; ---; --- 沒有價值
簡單 ---; ---; ---; ---; ---; ---; --- 不簡單/複雜
有變化 ---; ---; ---; ---; ---; ---; --- 沒有變化/完全一樣
大細聲的對比很小 ---; ---; ---; ---; ---; ---; --- 很大
2. How do you feel about this group of music extracts?
It is uninteresting---; ---; ---; ---; ---; ---; --- interesting
It is valuable ---; ---; ---; ---; ---; ---; --- worthless
It is simple ---; ---; ---; ---; ---; ---; --- not simple/complex
It is varied ---; ---; ---; ---; ---; ---; --- is not varied/all the same
The contrast of loud/soft is small ---; ---; ---; ---; ---; ---; --- large

3. 你會否時常聆聽這類音樂？
--- 每天; ---一週兩次; ---以週計; ---經常; ---以年計; ---甚少; ---從不
3. How often do you listen to this kind of music?
--- daily; ---twice a week; --- weekly; ---mostly; ---yearly; ---seldom;
----never

4. 你會購買這類音樂的 CD 嗎？
我會購買---; ---; ---; ---; ---; ---; --- 不會購買
4. Would you buy this kind of CD?
I would buy ---; ---; ---; ---; ---; ---; --- would not buy

Appendix H: Instruments of Beijing Opera

Different kinds of Chinese musical instruments are used in Beijing opera. These may be classified into two major categories: those used in lyrical scenes (*Wenchang* 文場), with arias and mime; and those used in fighting or war scenes (*Wuchang* 武場). A *Wuchang* involves a variety of non-melodic percussion instruments. They have different sounds, functions and roles in the accompaniment ensemble. The characteristics of these instruments are listed in the table below.

Non-melodic Percussion Instruments of Beijing Opera
京劇的打擊樂器

Instruments (名稱)	Function (用途)
Bangu (板鼓)	Conductor of the ensemble (指揮).
Ban (板)	To keep the pulse during singing (于歌唱時打節奏).
Tanggu (堂鼓)	Used in fighting, flag hoisting, at Court, and for timing and bringing in (i.e., indicating when they should start playing) other Chinese wind instruments (于戰爭、升帳、升堂、起更及哨吹打等).
Da Tanggu (Nan Tanggu) (大堂鼓(南堂鼓))	In fighting scenes, to emphasize the atmosphere (戰爭場面、加重氣氣力).
Daluo (大鑼)	Used when a general or warrior enters or exits the stage , in Wuchang , battles and wars, or to bring about a sudden change in atmosphere (用于武將或袍帶人物的上下場、戰爭或配突變的情感).
Xiaoluo (小鑼)	Mainly used in a lyrical setting, to accompany feminine gestures or humorous figure (s) entering or leaving the stage, or to accompany funny gestures (多用于文人、女性或詼諧人物的上下場和配合各種小動作).
Bo (鈸(鏡鈸、齊鈸))	Functions as a musical link between the daluo and the xiaoluo (在大鑼和小鑼中間起著聯系作用).
Nao (鐃)	Bigger gong with a louder sound (形体較鈸大、音量亦較大).
Xiabo (小鈸)	Small gong
Pengling (Xingzi) (碰鍾(星子))	Used in a female solo with a special tune or melody (用于青衣唱的反二黃裏).
Yunluo (云鑼)	Used in ensemble playing (用于合奏的曲牌裏).

The large number of percussion instruments can be grouped into four categories: 1) x*iaoluo* (小鑼), a rising-pitched small gong; 2) d*aluo* (大鑼), the falling-pitched large gong (in different sizes); 3) *bo* (鈸(鏡鈸、齊鈸)), the paired cymbal (in three sizes); and 4) drum consorts including the *ban* (板), a clapper, *gu* (鼓), a single-framed drum and *tanggu* (堂鼓), a double-framed barrel drum.

Symbolic meanings are associated with the four groups. For example, the sound produced by the *xiaoluo* is associated with happiness, festivity, and femininity. The *bo* symbolizes annoyance and stress. The *daluo* is connected with grand appearance and flamboyant manners.

Musically, the *daluo* keeps the pulse of the music and performs like the bass of an ensemble. The *gu*, considered as the director of the ensemble, sets the atmosphere and directs the pace and the flow of the music. It is well known for being capable of producing complicated and sophisticated rhythms. The main features of the percussion instruments are summarized in the following table.

Features of the four groups of non-melodic percussion instruments used in Beijing opera

Instrument	Timbre	Function/role in an ensemble	Symbolic meaning
Xiaoluo, small gong (小鑼)	Rising-pitch metallic sound	No specific function or role	Happiness, festivity, and femininity
Daluo, large gong (大鑼)	Falling- pitch metallic sound	Keeps the rhythmic framework of the music and performs as the bass of the ensemble of instruments. Used when a general or warrior makes his entrance or exit in a war scene (*Wuchangg* 武場), or to accompany sudden emotional change.	Grand appearance and flamboyant manners
Bo (鈸)	Metallic sound, no change of intonation/pitch	Provides musical link between daluo and xiaoluo	Annoyance and stress
Gu (鼓)	No change of pitch	Director of ensemble. Creates atmosphere, directs pace and flow of music.	

The instruments used in lyrical scenes (*Wenchang* 文場) include Chinese stringed and wind instruments (*guanxian tanboyue* 管弦彈撥樂) such as the *sanxian* (三弦), the *jingwu* (京胡) and the *daruan* (大阮).

Appendix I: Musical Origins of Beijing opera

Paizi and Beijing opera music

The music of Beijing opera, *Qupai* (曲牌), can be traced to two traditional operatic genres: Hebei clapper opera (*Hebei bangzi* (河北梆子) and *Kunqu*[1] (崑曲). *Qupa*, or *Paizi* (牌子), are melodies ready for text setting. They come from various sources, such as folk melodies. They are sometimes put together in a collection of works forming 'a pool of pre-existing labelled melodies' for different instrumental and vocal genres. Sometimes the name of the melody reveals where the music comes from, e.g., *Liangzhouxu*〔梁州序〕comes from a place of China called Liangzhou. Sometimes it sheds light on the musical characteristics of the piece, e.g., *Jiejiegao* 〔節節高〕, the rhythm of the music was getting faster. However, the name is usually just a label.

There are three kinds of *Paizi*. The first kind consists of melodies but no Luogudianzi (the rhythm formula), e.g., *Fendier*〔粉蝶兒〕(white butterfly). The second kind, *Hunpaizi* (混牌子), has both melodies and Luogudianzi, e.g. *Fengrusong* (風入松). The third kind has Luogudianzi but no melodies. These are known as *Ganpaizi* (干牌子).

[1] *Kunqu* opera, based on *Kunqiang* melodies that originated in Kunshan, Jiangsu province, in the Yuan dynasty, and which became popular during the ensuing Ming and Qing dynasties; now popular in southern Jiangsu, Beijing and Hepei.'

Appendix J: Luogudianzi and its scoring methods

There are several ways of notating the Luogudianzi. The traditional way is by mnemonics. The mnemonics deal with the number, dynamics, timbre, tempo and playing techniques of the instruments. The master of the Luogudianzi will teach them orally to pupils who have to memorize everything.

Later on, the rhythm formulae were written down using Chinese characters. Each instrument is represented by one character, the pronunciation of which resembles the sound of the instrument concerned. An alternative method is to use the first letter of the romanised Chinese character instead of the character itself. Simplified rhythmic notation is used in conjunction with the letters of the alphabet for more detailed indications. The table below summarizes the notation methods for Luogudianzi.

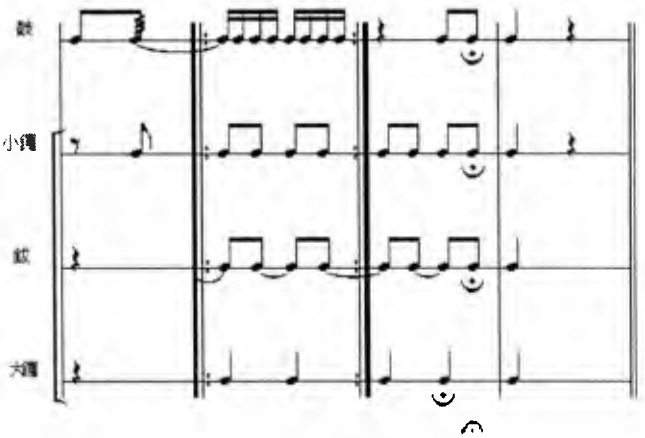
Mnemonics and Playing techniques of Luogudianzi used in Beijing opera (Zhang, 1958)

Instrument (樂器)	Chinese Character (Romanisation) 漢字	Alphabet (拉丁字母	Playing technique and sound effect (打法及聲音效果)
Daluo (大鑼)	匡 (*kuang*)	K	*daluo* solo; or *daluo*, *xiaoluo* and *bo* ensemble (大鑼獨奏；或大鑼、小鑼、鈸齊奏).
	頃(*qing*)或空	Q	Soft solo of *daluo*, or soft ensemble of *daluo*, *xiaoluo* and *bo*(大鑼獨奏弱音；或大鑼、小鑼、鈸齊奏弱音).
Xiaoluo (小鑼)	台(*tai*)	T	*xiaoluo* solo (小鑼獨奏)
	另(*ling*)	L	Soft playing of *xiaoluo* (小鑼弱音).
	匝(*za*)	Z	Muted *xiaoluo* playing or muted ensemble playing of *daluo*, *xiaoluo* and *bo* (小鑼悶音或大鑼、小鑼、鈸合奏悶音).
Bo (鈸)	七/才(*cai*)	C	*bo* solo, ensemble playing with *bo* and *xiaoluo*, or ensemble playing with *xiaobo* and *xiaoluo* (鈸獨奏,鈸與小鑼齊奏，或小鈸與小鑼齊奏).
	撲(*po*)	P	Muted playing of *bo* (鈸悶音).
Ban (板)	紮(*za*)或 (*yi*)衣	J	*ban* solo (板獨奏).
Gu (鼓)	搭(*da*)	D	Playing of *gu* with one drumstick (鼓單捶擊).
	哆(*duo*)	D	Muted playing of the *gu* with single drum stick (鼓單捶弱音).
	八(*ba*)	B	Muted playing of the *gu* with two drum-Sticks (雙鼓捶同時打).
	八搭(*ba da*)	bd	Playing of the *gu* with one drumstick after the other (雙

Instrument (樂器)	Chinese Character (Romanisation) 漢字	Alphabet (拉丁字母	Playing technique and sound effect (打法及聲音效果)
			鼓捶先後打).
	嘟兒(*du*)	D	Rolling of the *gu* with two drumsticks (鼓捶輪奏).
	隆冬(*long dong*)	ld	Beating the *gu* twice softly with a drumstick (鼓單捶輕打兩擊).
	哆羅(*duo lo*)	dl	Short rolling of the *gu* with a drumstick (鼓單捶小滾奏).
	乙(*yi*)	E	Rest sign and syncopated rhythm (休止符和切分音).

A common Luogudianzi formula called *Chongtou* (沖頭) is scored using rhythmic notation, letters of the alphabet and mnemonics below as an illustration.

***Luogudianzi-Chongtou (冲頭)* (Zhang, 1958, P.130)**

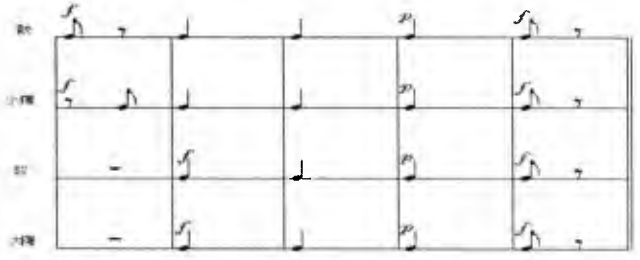
Examples	*Chongtou(冲頭)*
Rhythmic Notation of the Luogudianzi	
English Characters	| B d |: k c k c :|| k c k c | k ||
Traditional Luogudianzi Score (Mnemonics)	| 八 嘟 |: 倉七 倉七 :|| 倉七 倉七 | 倉 ||

Appendix K: The Functions of Luogudianzi in Beijing opera

For Miming

The Luogudianzi used in Beijing opera has different functions. There are Luogudianzi designed to accompany miming gestures such as getting on the stage, striking a pose, etc. The *Sijitou* (四擊頭) is an example.

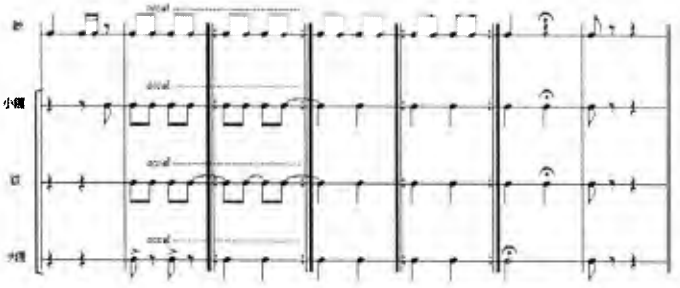
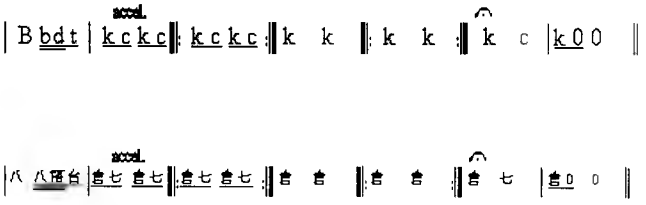
Sijtou (四擊頭) (Zhang, 1958, P.49)

Examples	*Sijtou (四擊頭)*
Rhythmic Notation of the Luogudianzi	
English Characters	| d t | k | k | Q | k 0
Traditional Luogudianzi Score (Mnemonics)	| 搭 台 | 倉 | 倉 | 頃 | 倉 0

For fighting or war scenes

There are special Luogudianzi formulae to go with fighting or war scenes. *Jijifeng* is the most popular of these.

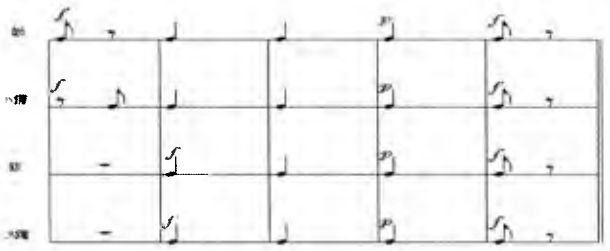
Jijifeng (急急風) (Zhang, 1958, P.219)

Examples	*Jijfeng (急急風)*
Rhythmic Notation of the Luogudianzi	
English Characters Traditional Luogudianzi Score (Mnemonics)	

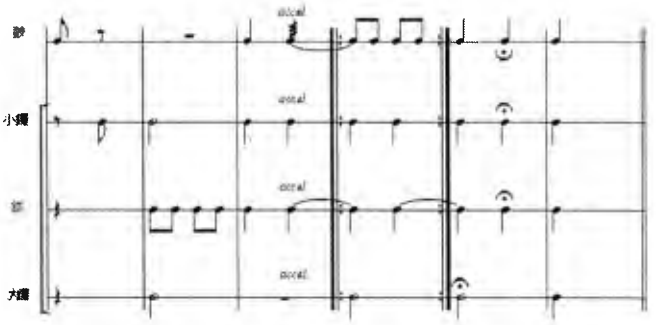
For a stylized miming sequence

Individual Luogudianzi formulae can be grouped together to accompany a series of miming gestures. For example, the *Qiba* (起霸) is a very common Luogudianzi sequence used to depict the heroic and gallant character of a general or a warrior. It consists of the following rhythmic formulae: *Sijitou* (四擊頭), *Changjian* (長尖), *Sibianyiji* (撕邊一擊), *Wanchang* (完場), *Chongtou* (沖頭), and *Guiwei* (歸位) (Zhang, 1958), with each formula accompanying a particular gesture. Each of these individual Luogudianzi formulae is notated below.

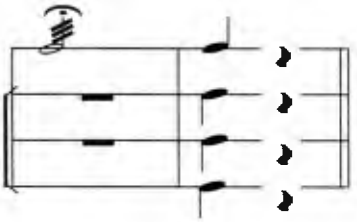
Sijitou (四擊頭) (Zhang, 1958, P.49)

Examples	*Sijitou (四擊頭)*
Rhythmic Notation of the Luogudianzi	
English Characters	| d t | k | k | Q | k 0 ‖
Traditional Luogudianzi Score (Mnemonics)	| 搭 台 | 倉 | 倉 | 頃 | 倉 0 ‖

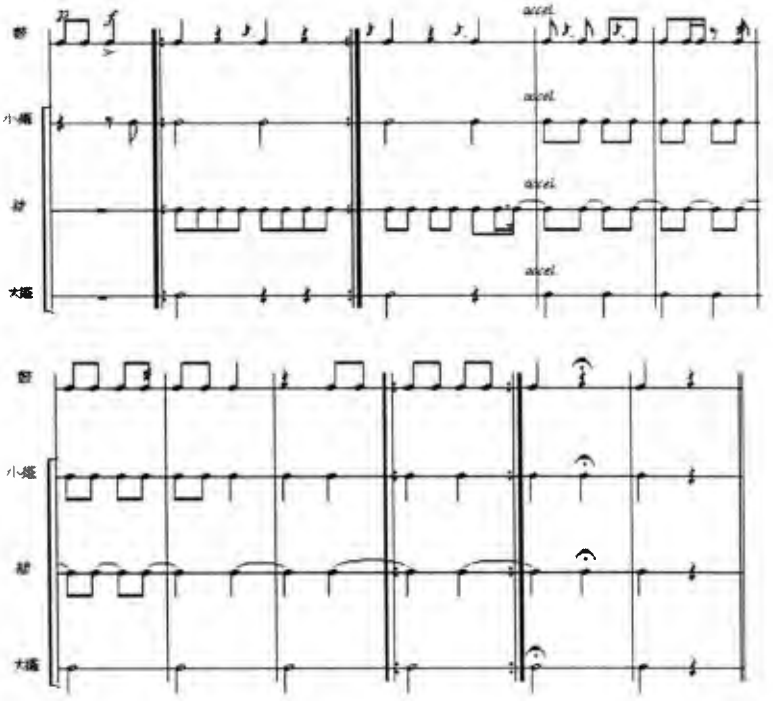
Changjian(長尖 (Zhang, 1958, P.132)

Examples	*Changjian(長尖)*
Rhythmic Notation of the Luogudianzi	
English Characters	| d t | k c c c | t t |: k c :| k c | k ||
Traditional Luogudianzi Score (Mnemonics)	| 搭 台 | 倉七 七七 台 台 |: 倉 七 :| 倉 七 | 倉 ||

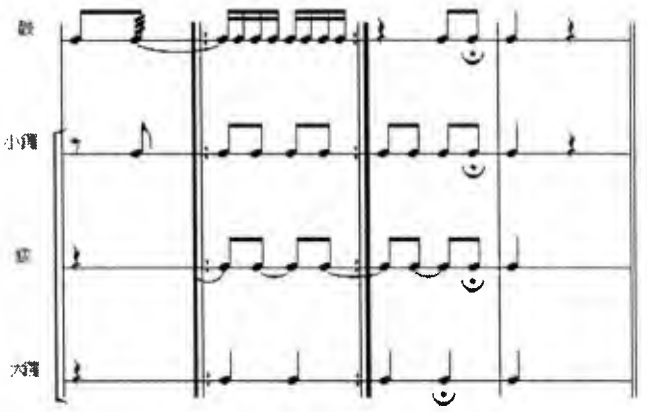
Sibianyiji (撕邊一擊) (Zhang, 1958, P.3)

Examples	*Sibianyiji(撕邊一擊)*
Rhythmic Notation of the Luogudianzi	鼓 小鑼 
English Characters	| d | k 0 ||
Traditional Luogudianzi Score (Mnemonics)	| 嘟 | 倉 0 ||

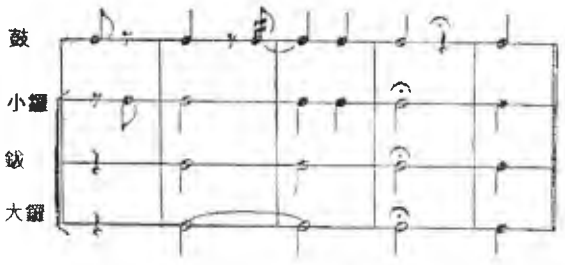
Wanchangg (完場) (also called *Yichuiluo 一錘鑼* and *Huitou 回頭)* (Zhang, 1958, P.141)

Examples	*Wanchang(完場)* also called *Yichuiluo 一錘鑼* and *Huitou 回頭*
Rhythmic Notation of the Luogudianzi	
English Characters	0 accel. | l d d t |: k c c c t c c c :| k c c c tc · c | k c k c | k c k c | / 緩鑼 \ | k c l c | k l c | k c |: k c :| k c | k 0 |
Traditional Luogudianzi Score (Mnemonics)	0 accel. | 隆冬 搭台 |: 倉七 七七 台七 七七 :| 倉七 七七 台七 七 | 倉七 倉七 | 倉七 倉七 | / 緩鑼 \ | 倉七 另七 | 倉另 七 | 倉 七 |: 倉 七 :| 倉 七 | 倉 0 |

Chongtou (冲頭) (Zhang, 1958, P.130)

Examples	*Chongtou(冲頭)*
Rhythmic Notation of the Luogudianzi	
English Characters	| B d |: k c k c :|| k c k c | k ||
Traditional Luogudianzi Score (Mnemonics)	| 八 嘟 |: 倉七 倉七 :|| 倉七 倉七 | 倉 ||

Guiwei (歸位) (Zhang, 1958, P. 62-63)

Examples	*Guiwei (歸位)*
Rhythmic Notation of the Luogudianzi	
English Characters	d t | k· d | c t | k – | k |
Traditional Luogudianzi Score	搭 台 | 仩· 嘟 | 七 台 | 仩 – | 仩 |
(Mnemonics)	

The dynamic level of the *Qiba* (起霸) sequence depends on the character who appears in the scene. Usually, it starts at a medium loud level. However, if the character is full of pride but has no substance, then the music will begin more loudly to suggest his arrogance, self-importance and overconfidence.

The table below sets out the individual Luogudianzi and the associated gestures in the *Qiba* (起霸) series (Zhang, 1958, P.298)

Gestures in the *Qiba* (起霸) series

1. Sijitou(四擊頭) *Action: Strike a pose (Liang xiang, 亮相) holding the lower part of his warrior's robe (xiajia下甲).*
2. Changjian(長尖) *Action: Walk on .*
3. Changjian(長尖) *Action: Put down the lower part of the warrior's robe and step back.*
4. Sibianyiji(撕邊一擊) *Action: Do a dancing gesture consisting of a reverse yunshou(反雲手), that is,a movement in turning of the hands.*
5. Siji tou (四擊頭) *Action: Strike a pose (Liangxiang 亮相).*
6. Chongtou(沖頭) *Action: Step back down stage to the left.*
7. Sibianyiji (撕邊一擊) with the playing of the bo *Action: Lift up the right hand and left leg and strike a pose (Caichui裁錘).*
8. Sijitou (四擊頭) *Action: Do a dancing gesture involving the reverse turning of the hands (反雲手) three times and strike a pose (Liangxiang亮相).*
9. Chongtou(沖頭) *Action: Step back into the wings (Shang chang men,上場門).*

10. Sibianyiji (撕邊一擊) with the playing of the bo Action: Fix the left cuff.

11. Sibianyiji (撕邊一擊) with the playing of the bo Action: Fix the right cuff.

12. Sijitou (四擊頭) Action: Fix the warrior's robe (Zhengkuisijiasuo 整盔,系甲索).

13. Wanchang(完場, equivalent to yi chuiluo 一錘鑼and huitou 回頭) Action: Fix the right and left lower parts of the robe and walk to the right upper stage to strike a pose (Liangxiang亮相).

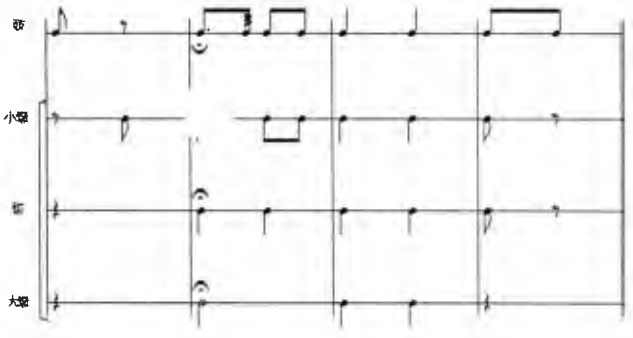
14. Chongtou(冲頭) Action: Put down the lower part of the robe, turn to the centre of the stage, and do the dancing gesture, yunshoudashou (雲手搭手),that are, movements of turning the hands.

15. Guiwei (歸位) Start reciting or singing the qupai (曲牌) called Dianfengchunfendier(點絳唇粉碟兒).

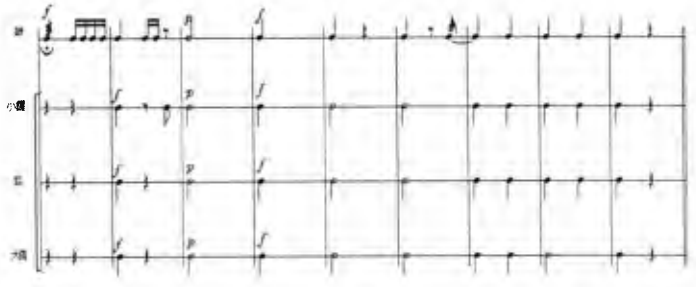
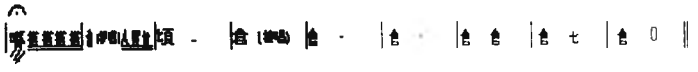
For singing

Other Luogudianzi or rhythm formulae, such as *Daobantou*(導板頭), *Kutou* (哭頭), *Niusi*(紐絲) and C*houtou*(抽頭) are used to go with singing. They can be an introduction to a song, a musical link between arias or the coda of an aria. The scores of some examples of this kind of Luogudianzi are shown below:

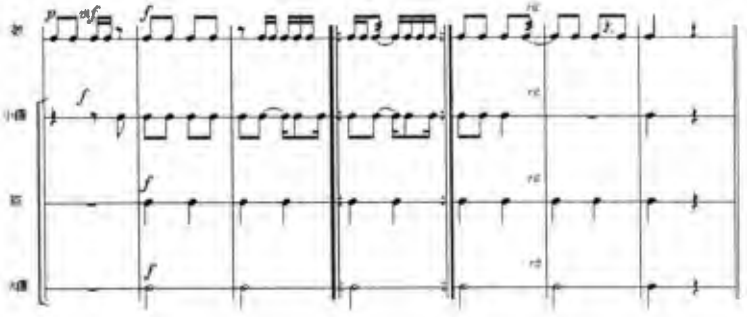
Daobantou (導板頭) (Zhang, 1958, P.66)

Examples	*導板頭*
Rhythmic Notation of the Luogudianzi	
English Characters	d t | k · d c t | k k | t d |
Traditional Luogudianzi Score (Mnemonics)	搭 台 | 倉 · 嘲 七 台 | 倉 倉 | 台 搭 |

Kutou (哭頭) (Zhang, 1958, P.66)

Examples	*Kutou (哭頭)*
Rhythmic Notation of the Luogudian zi	
English Characters	| d ddddd | k(咚咚) hdd | Q - | k(咚咚) | k - | k | k k | k c | k 0 ‖
Traditional Luogudian zi Score (Mnemonics)	

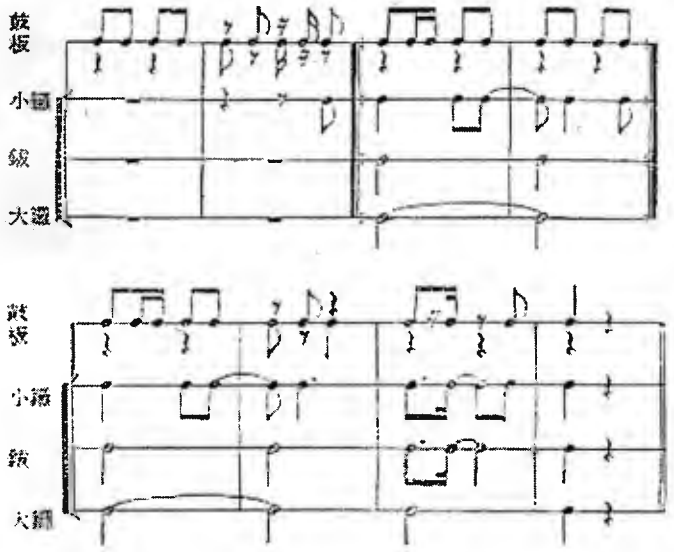
Niusi(紐絲) (Zhang, 1958, P.187)

Examples	*Niusi(紐絲)*
Rhythmic Notation of the Luogudianzi	
English Characters	0 rit. | l d b̲d t̲ | k t c t | k t c̲t t̲ |: k t c̲t t̲ :| k t c | k t c t | k 0 ||
Traditional Luogudianzi Score (Mnemonics)	0 rit. | 陰ㄘ 八搭ㄙ | 倉台 七台 | 倉台 七台 倉台 七台乙台 |: 倉台 七台 倉台 七台乙台 :| 倉台 七 | 倉台 七台 | 倉 0 ||

Choutou(抽頭) (Zhang, 1958, P.198-199)

Examples Rhythmic Notation of the Luogudinzi

ChouTou (抽頭)



English Character

| d d d d | j d j d t :| k l t | c t t :|

| k l t | j t j | k· c c t | k 0 ||

Traditional Score of Luogudinzi (Mnemonics)

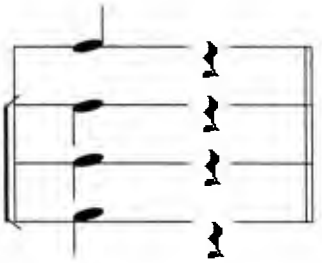
| 搭搭 搭搭 | 衣搭 衣搭合 :| 仓 另台 | 七台 乙台 :|

| 仓 另台 | 衣台 衣 | 仓· 七 乙台 | 仓 0 ||

For recitation

There are also Luogudianzi used to accompany recitation at the beginning and the end, or as links between recitations to highlight the atmosphere of the music, for example, the *Yiluo* (一鑼 , 一鑼錘):

*Yiluo (一鑼 , 一鑼錘))(*Zhang, 1958, P.1)

Examples	*Yiluo 一鑼 , 一鑼錘*
Rhythmic Notation of the Luogudianzi	鼓 小鑼 
English Characters	| k 0 ‖
Traditional Luogudianzi Score (Mnemonics)	| 倉 0 ‖

Still other Luogudianzi are atmospheric. For example, sounds imitating moving water are produced to suggest that the actors are on a boat in the river. Or the *xiaoluo* is given a number of beats to denote the time of the day or night. Special playing of this kind is directed by the conductor of the ensemble, the *bangu* player.

Generally, Luogudianzi are not bound to particular contexts by rules. The choice of a Luogudianzi depends on its effect when used with the singing or in a scene. For example, *Niusi* can be used as the introduction to the

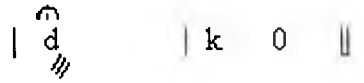
melody called *Sanban* (散板). It can also go with the beginning or end of a scene and with most miming gestures. The main functions of Luogudianzi are thus to build up a specific musical context, to magnify a dramatic effect, or intensify the effect of the emotions and expressions of the actor during a performance (Lu, 1991).

Appendix L

The Basic Structure of Luogudianzi

One beat and two beats

The basic rhythmic structure of Luogudianzi is a single beat , *Yiluo* (一鑼) The rhythm of *Yiluo* is:| x |. The x could be the only one beat performed by *daluo*, the mnemonic of which is k. or the *bo,* represented by the mnemonic: *c*. This pattern comes from events in daily life: for example, a sudden shock. This can be represented by a heavy strike on the *daluo*. There are about twenty ways to perform this simple one-beat rhythm using the *daluo* or the *bo* by changing the tempo, dynamics or musical context. For example, in the Sibianyiji Luogudianzi:



The term *Yiluo* refers to the number of beats on the *daluo*. Within the *Yiluo* rhythmical structure, there can be a two-beat rhythm, with the *bo* playing the second beat (mnemonic: c). Since the sound of the *bo* is softer than that of the *daluo* , a difference in timbre and accent will be produced. For example, | d t | k c | k || On the basis of this rhythm, a two-beat rhythm, such as a *Chongtou* (| x x | → | k c |) with each beat played alternately by the *daluo* and the *bo* is developed.

A number of Luogudianzi are composed by following this two-beat rhythmic structure with variations in tempo, dynamic contrast and the combination of instruments used (Zhang, 1958).

From two beats to four beats

Having the two-beat rhythm, for example, the *Chongtou* (| x x | → | k c |), it came the four-beat rhythms (| x x x x |) , such as| k c t c | or| k t c t |. One more instrument, the *xiaoluo* (mnemonic: t), joined in. Since the *xiaoluo* has a soft, rising metallic sound, while the *daluo* has a loud, falling metallic sound, a contrast is produced by using these two instruments together. By playing them in different sequences, various sound effects are achieved. For example, with the | k c t c | pattern, which accompanies a firm, balanced

walking movement, the *daluo* (mnemonic: k) plays the first accented beat, the *xiaoluo* (mnemonic: t) plays the second accented beat (i.e., the third beat), and the second and the fourth unaccented beats are played by the *bo* (mnemonic: c) with its falling sound. The whole effect is one of boldness and confidence. But when the same instruments are played in a different sequence, an entirely different effect will result. If the soft, rising metallic sound of the *xiaoluo* (mnemonic: t) on the second and the fourth beat is preceded by the strong, falling metallic sound of the *daluo* (mnemonic: k) on the first beat, and the falling sound of the *bo* (mnemonic: c) on the third beat, the four beat pattern becomes | k t c t |.

The effect becomes one of relaxation and casualness, contrasting sharply with the | k c t c | pattern described above.

Other variations of the k, t, and c are possible. For example, the k can be the *daluo* solo (*daluo duzou* 大鑼獨奏) or the *daluo*, the *xiaoluo* and the *bo* playing together (*daluo, xiaoluo, bo qizou* 大鑼、小鑼、鈸齊奏). The c can be the *bo* solo (鈸獨奏), with the *bo* and the *xiaoluo* playing together (*bo yu xiaoluo qizou* 鈸與小鑼齊奏), or with the *xiaobo* and the *xiaoluo* playing together (*xiaobo yu xiaoluo qizou* 小鈸與小鑼齊奏). The t can be the *xiaoluo* solo (小鑼獨奏). Thus, the| k t c t |, | k c t c | rhythmic patterns can be played in many ways with various combinations of instruments and in different manners (Zhang, 1958, p.338-339).

Three beats

Three beat patterns can be developed with the use of the *xiaoluo* . In the syncopated rhythm of | k l c c t | , 'l' stands for the soft playing of the *xiaoluo* , and 'c' stands for the brilliant sound of the *bo* . The two 'c's are tied together. An effect that is sonically and rhythmically new is then created (Zhang, 1958, p.329-330).

Many different Luogudianzi are developed using this syncopated rhythmic pattern, the Matuir being one of them:

| 0 l d b d t | k t c t | k t c t t ‖: k t c t t :‖ k t rit. c | k t c t | k 0 ‖

(c is a fermata)

Other patterns of sound are developed using the three-beat syncopated

rhythm. Below are some examples:

1. k l c c t | (The two 'c' s are tied).

2. k l c t | (These are triplets, with the 'k' and the 'c' being worth two thirds of the beat).

3. k t c t | (This produces a syncopated effect).

4. Q k 0 c | ('Q' is the muted solo sound of the *daluo* or the muted sound of the *daluo*, *xiaoluo* and *bo* being played together. 'k' is the sound of the *daluo*. '0' is a rest.).

Appendix M: The Categories and the Naming of Luogudianzi

The categories of Luogudianzi

Luogudianzi may be grouped according to the sound produced by the instruments [Zhang, 1958 #131] (Zhang, p.308). Generally, these may be classified into three categories. The sounds in each category are different, as a result of having a particular instrument as the leading or main instrument in the group. For example, the first group consists of the *daluo*, *xiaoluo*, *bo* and *guban*[2] with the *daluo* as the main instrument. This type of sound would be used to highlight a serious, exciting atmospheric setting, or to depict important, powerful and royal figures, and also for contrasting episodes in a specific context. By contrast, the second group, with the *xiaoluo* as the leading instrument together with the *guban* would help to create a light-hearted, funny atmosphere, to depicting a humorous figure or people from the lower classes, and to create quiet and peaceful scenes. The third group consists of the *bo*, *xiaoluo* and *guban* with the *bo* as the main instrument, but this category is not as widely used as the other two groups. A sad and dramatic sound effect is produced by this category as a result of the thin, sharp sound produced by the *xiaoluo* (Zhang, 1958, p.310-311).

The following table presents a summary of the categories of Luogudianzi with reference to the leading instrument in the group.

Categorization of Luogudianzi with reference to the leading instrument

Leading Instrument	**Members of the group**	**Atmospheric effect**
Daluo	*xiaoluo, bo and guban*	Serious, exciting atmosphere; Contrasting episodes; Royal figures
Xiaoluo	*Guban*	Light-hearted atmosphere; Humorous figure; People of lower class.
Bo	*xiaoluo, guban*	Sad atmosphere

[2] *Gu ban* were two different instruments. However, they were played by the same person. It was treated as one instrument (Zhang, 1958, p.308).

Luogudianzi can also be grouped according to the emotional changes they highlight (Zhang, 1958, P.314- 315) There are Luogudianzi which (a) indicate short, sharp emotional changes, e.g., *Yiluo* (一鑼 , 一鑼錘,), *Sijitou* (四擊頭) and *Wujitou* (五擊頭); (b) exaggerate emotional changes, e.g., *Sibianyiji* (撕邊一擊) and (c) highlight a longer period of emotional change, e.g., *Jijifeng* .

The naming of Luogudianzi

Luogudianzi can generally be named in three ways, (a) by borrowing the name from the title of the *qupai* (曲牌), e.g., *Fengrusong* (風入松); (b) according to the dance (*Wudaodongzhou* 舞蹈動作) for example *Matuir* 〔馬腿〕, stage setting(*Wutaidiaodong* 舞台調動) , for example, *Wanchang* 〔完場〕or music that they accompany(*Changqiangbanzhi* 唱腔板式), for example, *Daobantou* (導板頭), and (c) the number of beats of the Luogudianzi, for example, *Sibianyiji*[3]*(撕邊一擊) and Sijitou*[4] *(四擊頭).*

[3] There is one strike of the instruments in *Sibianyiji(撕邊一擊)*..

[4] There are four strikes of the instruments in *Sijitou (四擊頭)*.

Appendix N: Questionnaire of the pilot study

學號：_____ 性別：□男 □女 年齡：□11-12 □13-14 □15-16

	極不同意 Strongly disagree	不同意 Disagree	同意 Agree	頗同意 Quite agree	極同意 Strongly agree
1. 當我聽到這音樂選段時, 我會繼續聽。 1. When I hear the music, I would like to listen					
這是因為… … It is because…					
2. 這音樂選段能引起我的聯想。 2. This piece of music excerpt makes me think of something.	極不同意 Strongly disagree	不同意 Disagree	同意 Agree	頗同意 Quite agree	極同意 Strongly agree
a) 第一段音樂選段。 The first music excerpt.					
這是因為… … It is because….					
b) 第二段音樂選段。 The second music excerpt.	極不同意 Strongly disagree	不同意 Disagree	同意 Agree	頗同意 Quite agree	極同意 Strongly agree
這是因為… … It is because ….					

	極不同意 Strongly disagree	不同意 Disagree	同意 Agree	頗同意 Quite agree	極同意 Strongly agree
這是因為… … It is because ….

Appendix O : Audio Visual Clip 1 [Instruments used in Wenchang(文場) and Wuchang(武場)]

An introduction to and a demonstration of the instruments used in the settings called Wenchang (文場) and Wuchang (武場) [5] that appear in Beijing opera. This ended with a *Qupai*, an ensemble piece using all the instruments that had been introduced, called *Xiaokaimeng* (小開門).

[5] *Wenchang* and *Wuchang* are two of the main types of scene that appear in Beijing opera. *Wuchang* often consist of exciting, thrilling and stirring settings, while *Wenchang* are often quite the opposite, and can include love scenes or peaceful settings. Different instruments are used for each type of scene. Chinese stringed and wind instruments (管弦彈撥樂), such as the *sanxian* (三弦), the *jingwu* (京胡) and the *daruan* (大阮) are used in Wenchang, while non-melodic percussion instruments (京劇鑼鼓) such as the *bangu* , the *daluo* , the *xiaoluo* and the *bo* are used in *Wuchang* .

Appendix P: Audio Video Clip 2 (An actor miming mounting a horse)

The video clip consisted of a series of Luogudianzi, including *Jijifeng*, *Matui*, and other Luogudianzi,[6] accompanying the stylized miming of a female general a *Wutan*, playing (a female general) with her spear, pretending to get on a horse

[6] The series of Luogudianzi were also extracted and recorded on a CD as audio materials for teaching 1 of treatment 1 in Experiment Two.

Appendix Q: Audio Visual Clip 3 (A general playing with his spear)

The *Jijifeng* helped to depict the heroic and courageous character of a general, accompanying his dramatic action of playing with a spear.

Appendix R: Audio visual clip 4 (Water sound)

Two actors performed the mime of getting into a boat while the Water sound was played by beating the *xiaoluo* gently along the rim.

Appendix S(i): Test Music for Experiment 1

There were two musical episodes of Luogudianzi: *Jijifeng* and water sound

Appendix S(ii): Test Music for Experiment 2&3

The test music for Experiment 2 is a series of four Luogudianzi: the one-beat *Sibian yij*(撕邊一擊), the two-beat *Chongtou*(沖頭), the three-beat *Niusi*(紐絲) and the four-beat *Jijifeng*(急急風).

Appendix S (iii): Test Music for Experiment 4

The test music for Experiment 4 is series of Luogudianzi of Xiaoluo Jinqianhua Lingyiti (小鑼金錢花另一體), Shibazhi (十八子), Baolaocui(鮑老催) and Ganweisheng (干尾聲). Xiaoluo Jinqianhua Lingyiti (小鑼金錢花另一體).

Appendix T: Audio Visual Clip 5 (Examples of the stylized miming of *Qiba*(起霸))

This was of a series of detailed stylized miming gestures called *Qiba* (起霸), describing the heroic and gallant character of a general or a warrior, and using a number of Luogudianzi commonly used for *Qiba* (起霸), for instance, *Sijitou* (四擊頭), *Changjian* (長尖), *Sibianyiji* (撕邊一擊), *Wanchang* (完場), *Chongtou* (沖頭), and *Guiwei* (歸位) [Zhang, 1958 #131]. The *Qiba* found on the tape was more simplified than the set in "*Tiaohuache*" (挑滑車)[7] , which is a typical example of *Qiba* (起霸).

[7] "*Tiaohuache*" (挑滑車) is the traditional stylized miming sequence of *Qiba (起霸)*, performed in great detail. More Luogudianzi were used to accompany the set of stylized miming gestures.

Appendix U: Audio Visual Clip 6 (A fighting scene of two generals)

This was a fighting scene of two generals accompanied by the *Jijifeng* Luogudianzi.

Appendix V: Audio Visual Clip 7 (One-beat structure)

A shock for the minister *Kong Ming* (孔明), when he finds out that a junior general, *Ma Zhi* (馬謖), has upset his armed forces strategy. The one-beat structure Luogudianzi *Yiluo* (k or c)[8], emphasizes the dramatic contrasts in the changing emotions of *Kong Ming*

[8] *YiLuo* performed with the *Daluo*, ***k***, suggests something exciting, whereas when it is played with the *Xiaoluo*, ***c***, it suggests something gentle.

Appendix W: Audio Visual Clip 8 (Two-beat structure)

The two-beat structure, *Chongtou*, paints the disturbed feelings and worries of Kong Ming in view of the coming big fight with *Sima Yi*, who had only a small number of old and weak soldiers.

Appendix X: Audio Visual Clip 9 (Three-beat structure)

The three-beat structure of Luogudianzi, a female general was playing with her spear, pretending to get on a horse.

Appendix Y: Audio Visual Clip 10 (Four-beat structure)

The four-beat structure, describing the firm and stately walk of the great general *Sima Yi* (司馬懿) , using the *bo,* and the relaxed walk of *Kong Ming* , played on the *xiaoluo.*

Appendix Z: Teaching approaches of variable three 'Students' control over music activities or 'framing'

Treatment 1: More students' control over music activities

Lessons one and two: instruments of the Beijing opera

In lesson one, students of Treatment 1 completed the questionnaire at the beginning of the lesson. After that, teacher introduced the percussion instruments used in Beijing opera. Then the students in each group experienced the sounds of the instruments scuh as *xiaoluo*, *daluo*, *bo*, and *sadi* (the replacement for the *bangu*) in groups. There were altogether 7 groups of students each of which was provided with a set of the four instruments. The teacher reminded the students to note down the ways in which they played the instruments, for example, how loud or soft the instruments sounded, which part of the instrument they hit, what skills were required to play them, etc., on the overhead projector. This activity was similar to the sounds exploration activities carried out in Experiment One and Two.

In lesson two, the students reported to and performed in front of their classmates. Teacher and students responded with comments.

After that, the teacher introduced the instruments used in the *Wenchang* and *Wuchang* of Beijing opera, using the video clip. The students' attention was then drawn to the different sound effects of the *bo* produced by the beaters for the *xiaoluo* and *bangu*. The teacher introduced a number of other percussion instruments, such as the *tanggu* (堂鼓) and the *yunluo* (雲鑼).

Lessons three and four: The musical features of Luogudianzi

In the third and the fourth lessons, the teacher focused on the two musical features of Luogudianzi: (a) contrasts in the dynamics and rhythms of Luogudianzi; and (b) the possible atmospheres that were created and emotional changes emphasized by the Luogudianzi. In doing this, the teacher asked the students to recall and share something that they felt was frightening, peaceful, exciting or funny. This could be a nightmare, a quiet moment, or the excitement they felt when playing games.

In the third lesson, the students were divided into seven groups. They produced reports on the most interesting scenario to the whole class by drawing a four-panel comic strip or a drawing. The students shared how they felt during that incident. After the report, the students were grouped together again to compose some rhythmic patterns to describe their feelings or the scenario. The teacher advised them to pay attention to the fastness or slowness, softness or loudness of the rhythmic patterns.

In the fourth lesson, the teacher asked the students to note down the rhythmic patterns and to highlight the contrasts in dynamics and speed using their own symbols. They performed their work in front of the class together with the picture and the graphic notations they had composed. After that, the teacher showed them how Luogudianzi help to describe characters, highlight emotional changes and depict scenarios by having them watch the video clip extracts from the Beijing opera *Kongchengji* (The trick of the empty city 空城計) and *Sanchakou* (At the road junction 三叉口). While they were watching *Kongchengji,* the teacher did not explain how the Luogudianzi worked with the scenarios shown in the video excerpts. He asked the students to note down their observations with reference to the following questions:

Which instruments were used when *Sima Yi* and *Kong Ming* were on stage?

How were the instruments played? What sound effects were produced?

What happens to *Kong Ming* when he finds out that a junior general, *Ma Zhi* (馬謖), has upset his armed forces strategy? How does he react? What happens in the music?

The teacher then told them that the music was loud when *Sima Yi* appeared. The *daluo* was used to indicate *Sima Yi's* status and the triumphal atmosphere. When *Kong Ming* was on stage, the *xiaoluo* was used. This symbolized the fact that *Kong Ming* was a learned man. The Luogudianzi were fast and loud when *Kong Ming* received the shock of the bad news.

The teacher then told them they were going to watch an extract from *Sanchakou*. Two heroes were fighting in the dark. The students had to think about:(a) whether they could understand what was happening by watching the miming or actions; (b) how they would feel if there were no Luogudianzi accompanying the miming. The students answered these two questions when they had finished watching the video extract. The teacher

then explained how the fast-and-slow changes of the rhythmic patterns and the loud-and-soft dynamic contrasts of the Luogudianzi had highlighted the performance of the artists. After this, the teacher practised the mnemonics of the *Sibianyiji, Chongtou*, *Niusi* and *Matui* with the students.

Lessons five and six: Playing Luogudianzi and information about Luogudianzi

In the fifth lesson, the teacher reviewed the two musical features of Luogudianzi using the two video clips. He practised the mnemonics and played the *Sibianyiji, Chongtou*, *Niusi* and *Matui* with the students. After that, the students were grouped together to refine the rhythmic patterns that they had composed in the third lesson. They were encouraged to incorporate the Luogudianzi they had learnt in describing the scenario.

In the sixth lesson, the teacher continued with the musical features of Luogudianzi by: (a) reviewing the different moods suggested by *Sibianyiji, Chongtou*, *Niusi* and *Matui*, by getting the students to compose or play any of the Luogudianzi to describe the pictures that they were referring to; (b) asking the students to refine the Luogudianzi they had composed to describe the scenario they had come up with in lessons three and four. The teacher reminded them that they were free to combine any Luogudianzi. There were no fixed rules about how to do this. Each group was then invited to put on a performance.

After the performances, the teacher went over aspects of Luogudianzi such as the functions of Luogudianzi, musical notation, and the basic structure of Luogudianzi, with examples of : the one-beat *Sibianyiji* (撕邊一擊), the two-beat *Chongtou* (沖頭), and the three-beat *Matui*(馬腿).

The lesson ended with the completion of the questionnaire.

Treatment 2: Less students' control over music activities

Lessons one and two: Instruments of the Beijing opera

In Treatment Two, students of Treatment 2 completed the same questionnaire used in Treatment 1 at the beginning of the lesson. After that, teacher began the introduction to the Chinese percussion instruments using the CD-ROM. An account of the different types of Chinese percussion

instrument, the classifications of the instruments and the skills required in playing the instruments was provided. The teacher invited the students to experience the sounds of the instruments and the skills required to play them. The students beat loudly on a *bo* to indicate a festive atmosphere, and heavily on a *daluo* to symbolize a flamboyant figure. Other percussion instruments, such as the *tangu* (堂鼓) and the *yunluo* (雲鑼), were introduced using the CD-ROM.

In lesson two, the teacher introduced the instruments used in the *Wenchang* and *Wuchang* of Beijing opera using the video clip. An introduction to the musical origins of the Luogudianzi of Beijing opera (*Paizi*) was given.

Lesson three and four: Musical features of Luogudianzi

In lesson three, the teacher continued to describe the origins of the Luogudianzi of Beijing opera (*Paizi*). He demonstrated how Luogudianzi were powerful in portraying characters, depicting specific contexts of the story, and in highlighting emotional changes, by showing them the same video clips as used in Treatment 1: *Kongchengji* (The trick of the empty city) and *Sanchakou* (At the road junction 三叉口). Before watching the video extracts, the teacher asked questions similar to those asked in Treatment 1 to draw the student's attention to the musical features of Luogudianzi. The Treatment 2 students had to think about how the Luogudianzi highlighted the miming of the artists, and how the Luogudianzi sounded as they accompanied the performance. Having gathered the students' responses, the teacher concluded that the most important musical features of Luogudianzi were the contrasts in dynamics and the tempo changes.

In lesson four, the teacher revised the musical features of Luogudianzi by playing *Sibianyiji, Chongtou, Niusi* and *Matui*. The teacher stressed that the students were free to combine any Luogudianzi they liked.

Lessons five and six: Playing Luogudianzi and information about Luogudianzi

In the fifth lesson, the teacher reviewed the Luogudianzi by playing and practising the mnemonics for *Sibianyiji* and *Chongtou*. After that, the teacher showed them some pictures. The students had to play either *Sibianyiji* or *Chongtou* to match the atmosphere of the pictures.

In the sixth lesson, the teacher continued with *Matui* and *Niusi*. The moods

suggested by these two Luogudianzi were highlighted. The teacher showed the students some pictures and then asked them to describe the pictures using the *Sibianyiji, Chongtou, Matui* or *Niusi.* They were free to combine any of the four Luogudianzi to form new Luogudianzi. There was no fixed number of Luogudianzi that had to be combined. After that, the teacher went over aspects of Luogudianzi, including the functions of Luogudianzi, musical notation and the basic structure of Luogudianzi such as the one-beat *Sibianyiji*(撕邊一擊), the two-beat *Chongtou*(沖頭) and the three-beat *Matui*(馬腿).

The lesson ended with the students completing the same questionnaire done at the beginning of the lesson.

Appendix Z1: Audio Visual Clip 11

An extract from *Sanchakou* (At the road junction 三叉口) illustrating how the Luogudianzi highlighted sudden changes of emotion and also a typical miming of two heroes fighting in a small dark room.

Appendix Z2: Non-significant tables of Experiment 4

A. Questionnaire items tested students' attitudes towards the Luogudianzi of Experiment 4

1. Questionnaire item 1 (How much do you like this group of music extracts?)

Figure Z2-1: Insignificant mean values of students' attitudes scores to Questionnaire item 1 after Exposure 1, Exposure 2 and Exposure 3.

Scales used	Paired Mean Values		Paired mean difference	Number of students	t	Sig. (2-tailed)
Dislike very	Exposure 1	5.12	-.092	185	-.875	.383, NS
	Exposure 2	5.12		185		
Much/Like very much	Exposure 2	5.22	.064	187	.626	.532, NS
	Exposure 3	5.16		187		
	Exposure 1	5.15	-.027	188	-.255	.799, NS
	Exposure 3	5.18		188		

2. Questionnaire item 3. (How often do you listen to this kind of music?)

Figure Z2-2: Insignificant mean values of students' attitudes scores to Questionnaire item 3 after Exposure 1, Exposure 2 and Exposure 3.

Scales used	Paired mean values		Paired mean difference	Number of students	t	Sig. (2-tailed)
Daily/twice a week/weekly/ mostly/yearly/ Seldom/-never	Exposure 1	5.83	-.075	187	-1.136	.257, NS
	Exposure 2	5.90		187		
	Exposure 2	5.92	.037	189	.493	.623, NS
	Exposure 3	5.88		189		
	Exposure 1	5.84	-.053	188	-.721	.472, NS
	Exposure 3	5.89		188		

B. Questionnaire items tested students' perception of the Luogudianzi of Experiment 4

1. Questionnaire item 2 (How do you feel about this group of music extracts?)

Figure Z2-3 Insignificant mean values of students' scores for the other four pairs of adjectives items of the Questionnaire item 2 after Exposure 1, Exposure 2 and Exposure 3.

Pairs of adjectives	Paired mean values		Paired mean difference	Number of students	t	Sig. (2-tailed)
Valuable/ worthless	Exposure 1	4.72	-.048	187	-.415	.679, NS
	Exposure 2	4.77		187		
	Exposure 2	4.77	.110	189	.892	.373,
	Exposure 3	4.66		189		NS
	Exposure 1	4.73	.008	186	.720	.472,
	Exposure 3	4.65		186		NS
Simple/ complex	Exposure 1	3.89	.181	188	1.345	.180,
	Exposure 2	3.71		188		NS
	Exposure 2	3.70	-.321	190	-.2.334	.021,
	Exposure 3	4.02		190		NS
	Exposure 1	3.86	-.128	188	-.908	.365,
	Exposure 3	3.99		188		NS
Varied/ all the same	Exposure 1	3.67	-.085	188	-.684	.495,
	Exposure 2	3.76		188		NS
	Exposure 2	3.77	-.158	190	-1.127	.261,
	Exposure 3	3.93		190		NS
	Exposure 1	3.66	-.290	188	-2.010	.046,
	Exposure 3	3.95		188		NS
Small/ large	Exposure 1	4.24	.110	187	.938	.35, NS
	Exposure 2	4.13		187		
	Exposure 2	4.11	0.180	189	.891	.374, NS
	Exposure 3	3.93		189		
	Exposure 1	3.66	-.290	188	-2.010	.046, NS
	Exposure 3	3.95		188		

C. Questionnaire item tested students' perception of the Luogudianzi for students who scored 4 or blow after Exposure 1 of Experiment 4

1. Questionnaire item 2 (How do you feel about this group of music extracts?)

Figure Z2-4: Insignificant mean values of students' scores for the pairs of adjectives items 'uninteresting/interesting' and 'small/large' of the Questionnaire item 2 after Exposure 1, Exposure 2 and Exposure 3 for those who score 4 or below after the first exposure.

Pairs of adjectives	Paired mean values	Paired mean difference		Number of students	t	Sig. (2-tailed)
Uninteresting /interesting	Exposure 1 Exposure 2	3.04 2.83	.208	101 101	1.22	.225, NS
	Exposure 2 Exposure 3	2.83 3.02	-1.88	101 101	-1.107	.271 NS
	Exposure 1 Exposure 3	3.04 3.02	.020	102 102	.113	.910, NS
Small/large	Exposure 1 Exposure 2	3.60 3.70	-.100	100 100	-.591	.556, NS
	Exposure 2 Exposure 3	3.70 3.83	-.130	100 100	-.785	.434, NS
	Exposure 1 Exposure 3	3.61 3.82	-.216	102 102	-1.064	.290, NS

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